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Vol. XXVII.

JANUARY 1, 1899.

No. 1.



CLEANINGS

IN BEE CULTURE

A JOURNAL DEVOTED
TO BEES, HONEY,
AND HOME INTERESTS.

The A. I. ROOT CO.
MEDINA, OHIO.

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The A. I. Root Co., Medina, Ohio.

COLLECTINGS IN BEE CULTURE

A JOURNAL
DEVOTED
TO BEES,
AND HONEY,
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INTERESTS

ILLUSTRATED
SEMI-MONTHLY

Published by THEA-ROOT CO.
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HAPPY New Year!

LOTS OF US have felt pained ourselves at the thought of Doolittle with broken ribs suffering pain at every breath.

H. W. BRICE says the fruit crop on a farm near one of his out apiaries is worth \$500 a year more than it was without the bees.—*B. J.*

No, I COULDN'T CONTRACT to furnish 100 lbs. of propolis, nor of beeswax either. Couldn't furnish more than $\frac{1}{3}$ to $\frac{1}{2}$ as much propolis as wax.

P. H. ELWOOD is favored by Editor York as one of the directors of U. S. B. K. Union. Good man. I'll vote for him too. [So do I. See editorial elsewhere.—ED]

GIVEN a good district and a score of hives, he would be a very bad bee-keeper, possessing business aptitude, and not afraid of work, who could not exceed \$125 a year, says *British B. J.* I'm afraid not many districts in this country are good enough for that.

"WE BELIEVE that we are, here, on the southern limit of safe cellar-wintering; and if we lived farther north we would invariably winter the bees in a cellar," says C. P. Dadant in *Am. Bee Journal*. That justifies my celaring, but still I always have a hankering after out-door wintering.

OPPOSERS of plain sections will find an argument against them furnished by J. E. Crane, p. 915. The $1\frac{1}{8}$ old-style section had a thicker comb than that in the $1\frac{1}{2}$ plain, and the difference looked to him three times what it actually was. That is, a comb looks thicker in the old-style section.

C. P. DADANT's article, p. 907, is a comfort to me. It settles the matter that eight-frame hives are better for me, although the large hives are better for him. At the same time, I envy him the advantages he has in the larger hives. [How comfortable it is to believe what we like to believe! It gives us an uncomfortable feeling to think that we have adopted a

sort of supplies that are not best suited to yield the best results.—ED]

WITH FENCES having cleats in thickness running 13 to 2 inches, a $1\frac{1}{2}$ inch plain section will have a comb with a thickness about midway between the thicknesses of the combs in old-style $1\frac{3}{4}$ and $1\frac{1}{8}$ sections, leaning a little to the smaller size.—[This will be true, perhaps, with old-style sections; but the rule does not seem to hold true in the case of fence honey, but for what reason I do not know.—ED.]

THAT FENCES will make sections so even in weight that they may be honestly sold by the piece will need much observation to prove; but if such proves to be the case, it will be a strong argument in their favor.—[While I do not claim that this result can be secured beyond a peradventure, yet the experiences of those who have produced and sold honey in plain sections seem to point strongly that way.—ED.]

PROGRESSIVE'S Somnambulist expresses fears lest a result of Critic Taylor's work may be to deter many of our most practical bee-keepers from giving valuable information possessed by them. Let us hope not. An evident softening of his manner gives promise that better work is coming, and I can't help thinking that he has done some good by making some of us look a little more closely to our p's and q's.

D. W. HEISE is in trouble that he lays to the devil of the *Canadian Bee Journal*. The types, under the manipulation of said devil, made Heise speak of a 39 frame super! He disclaims supers so large, and the next number reduces the size, making him work "three-nine-frame supers." Isn't 27 a rather large number yet, friend Heise? Let the devil alone, and stand over that proof-reader with a club till he makes it "three nine-frame supers."

THE HOLTERMANN hive-cover is mentioned in *C. B. J.*, by D. W. Heise, as a flat cover costing about the same as the ordinary cover, absolutely water-tight, and a good non-conductor of heat and cold. Something in that line has been needed a long time. [If I remember correctly, our figures show that this hive-cover cost us more than the all-

wood ones. It is cheap, as made by the E. L. Goold Co., because they have a good deal of sheet metal that is used for protecting certain packages, and this metal is practically good for nothing otherwise.—ED.]

HARRY HOWE will be after you for libel, Mr. Editor, for heading his article "Black Bees Preferred." He says he can work faster with black bees, but in the same paragraph practically says the Italians or Carniolans worked faster for him. He says that, when convinced that fancy stock will get enough more honey to pay, as he was the past season, of course he'll have it. And Cogshall will spend \$50 in the spring in the same way. No, Harry's no longer a "black" man. [It seems to me that Harry is sort o' on the fence.—ED.]

YE EDITOR wonders, p. 933, why our house doesn't look as well outside as in. Well, the women run the inside; but I must draw the line somewhere, and I still have some control outside. I believe in a man standing up for his rights. [The line is seldom drawn quite so sharply as on the outside of the rear of one's house. Yes, I am a firm believer in men's rights—around the house, and in it too. There is one "right" I do not have in the house—that is, the liberty of throwing my coat and hat wherever I please, or of leaving books and magazines where I sat last.—ED.]

DOOLITTLE gives in *Progressive* a plan to prevent swarming that looks good. When the yield is on, and a tendency to swarm, cage queen in hive. Ten days later remove her and cage in the same place a young laying queen, with candy enough so she'll be liberated in about two days, cutting all queen-cells. The bees will do the rest. [Yes, it does look very promising; but I wonder how it would work generally to let loose the same queen back in her old hive. I suspect, however, that a young queen would do a better job at destroying the cells, while the old one might accept the situation as a preparation for swarming; and swarm she and the bees would, perhaps shortly after.—ED.]

I MUST HAVE BEEN very busy when GLEANINGS for Apr. 15 came, not to notice on p. 306 the assurance of the editor in claiming M. D. Andes on his side in the show of hands for section-holders and T supers. Mr. Andes distinctly says that he prefers *wide frames* to any other arrangement. O Ernest! [I turned away back to page 306, and I found that Mr. Andes says: "If you were to make me a present of 100 complete T supers I would not use them so long as I could get wide frames. I prefer the wide frames to any other arrangement for comb honey, except, perhaps, the Danzy super." The Danzy super uses section-holders pure and simple; in fact, Mr. D. adopted them after seeing how nicely they worked in our supers. But wide frames are section-holders without top-bars. I still claim that Mr. Andes is on my side. O doctor!—ED.]

"WHEN A QUEEN is discovered being 'ball-ed' she should be released without delay, either by pulling the 'ball' of bees away from the queen singly, or in extreme cases by im-

mersing queen and bees in water till the bees are forced by the law of self-preservation to release the queen."—*British Bee Journal*. Isn't smoking better than either way? Hold the smoker far enough from the queen so the smoke will be cold. Hot smoke will make the bees sting the queen. [I have tried all three of the methods spoken of above, and as a general rule I prefer the last named. But I have had cases where the ball of angry bees would not yield even to smoke. I have then picked the ball up by the wings of one bee, and dropped it into a basin of water. So far as I can remember the ball would always melt away immediately, and the bees would swim for the edges of the basin.—ED.]

WHEN I LOOKED at those two sections on p. 914 I said they were worse as to pop-holes than thousands I had produced of the old kind, but I suppose the shadow exaggerates the holes in the picture. [Those two sections were not introduced to show pop holes or no pop-holes, but only the slight ridging that was just barely perceptible in sections I found at Mr. Morton's. By the way, the Morton fence is not constructed in a manner calculated to do away with pop-holes. The posts or cross-cleats run clear up the full length of the section; and as they are $\frac{3}{4}$ inch wide they practically secure the same result, so far as pop-holes are concerned, as the old style scorched-out section with an ordinary separator. If the fences are made as shown on page 912, Fig. 3, at A, results will be secured more like the bottom engraving shown on page 920, for this honey was produced with just such a fence. While I do not claim that a fence constructed as in Fig. 3 will do away with pop-holes in plain sections (I should be very foolish if I did), from what I have been able to observe it will go a long way toward that desideratum.—ED.]



BEE-KEEPING IN CUBA.

The Desolate Condition of the Island; How the Starving Ones are Fed; Reported by the Special Correspondent of Gleanings.

BY W. W. SOMERFORD.

[A few weeks ago I stated that Mr. Somerford was going to take a trip to Cuba, with his camera. As he had kept bees extensively on that island, and as he was about to visit it again, I arranged for a series of articles. He is to describe the conditions there existing, and state whether bee-keeping there will pay; tell us about the competition of Cuban honey; average yields per year, etc. We have just received the first article, and along with it

comes a note which is of such interest that I submit it to our readers.—ED.]

I found so few bees on the island, and so much starvation and misery, that, instead of spending the winter, a month there was enough for me this time. I also investigated Porto Rico through Dr. Vieta, of Cienfuegos. His last honey crop was only three hundred and sixty thousand pounds from two apiaries. So you see California isn't in the lead with her 65 tons from one man.

W. W. SOMERFORD.

[Only 360,000 pounds of honey from two apiaries! and all produced by one man! My, oh my! Suppose the duty on Cuban honey were to be removed; and suppose it is thrown in such quantities on the American markets; and suppose—well, I will let the reader do the rest of the supposin'. Here is the article, and I am sure it will be read with interest:]

Starvation in Cuba! I have just returned from a trip through Cuba—a sort of inventory trip—to ascertain what was left, after the war, of some of the finest apiaries in the world, and also to embark in the bee business again in Cuba after an absence of four years from that island. I visited many apiaries that were in a run-down condition, and will report through GLEANINGS the situation in Cuba exactly as one now finds it. But by way of caution I will suggest to those in a hurry to embark in the honey business in Cuba that there's plenty of time; the island is not such a paradise just now—not even for the modern honey-producer. And to those bee-keepers in the States who fear that the American market is going to be ruined by cheap dark grades of honey from Cuba I will say that Amsterdam, Holland, and foreign cities in general, get the honey that's produced in Cuba—not the American markets. The American honey-producers in Cuba, who have tried the United States markets, have paid for their experience in shipping, commission, lighterage, freight, cooperage, drayage (import duty 10 cents per gallon), and commission, to say nothing of leakage; and by the time these charges are figured up, and the cost of package added, at the Cuban cost, 5 cts. per gallon, the shipper wonders why he didn't sell in Havana at 40 or 50 cts per gallon net (packages paid for by the honey buyer).

After traveling hundreds of miles over the country I came to the conclusion that next October or November will be soon enough for the would-be Cuban bee-keepers to embark for Cuba; and to impress the fact on the minds of those who, *like myself*, are in a hurry to get to Cuba before it is overrun (with any thing but starvation), I will describe one of Miss Clara Barton's Red Cross kitchens that are now numerous and famous in Cuba.

The kitchens are located in some out-of-the-way place or back street in the cities. This one was at Sagua Lagrange—a city of 20,000 inhabitants in Santa Clara province, on Sagua River. The kitchen is nothing more nor less than a row of pots under some old shed, sur-

rounded by a good wall or fence, with water convenient. The pots are surrounded with masonry, the same as sugar-kettles, and hold about 100 gallons each. In the above city 2500 people are kept from starving by the provisions cooked and distributed from the pots, steaming hot, at meal time. A list of the ones nearest death's door is made. The number of persons in each family is taken down in a large book, and a ticket given to each family to correspond with his name. These tickets are carried daily to the kitchen; about fifty people are let into the kitchen inclosure at a time, with tickets in hand, and they march in a row by the book-keeper, and a tally is made for each ticket opposite his (or her) name; then the ticket is handed to the superintendent (Manuel Sanguily was in charge at Sagua City), who reads out the number of rations each ticket calls for; thus, four and four, two and two, three and a half and three and a half, or one and one, which means one ration of boiled beans and one ration of rice. Two men stand over the pots of beans and rice, each with ladle in hand, one dipping beans, the other rice, with ladles that hold about a pint and a half each; so one and one means a dish of beans and a dish of rice that will feed a person well for a day, so far as quantity is concerned.

The utensils carried for provisions by the starving people are as different as the people are themselves, ranging from gourds to 10-lb. paint-kegs. Such a variety can only be imagined, not described; and such a variety of faces and dresses one would never see in America. There were many half-starved half-naked children from ten to fifteen years old that had gone barebacked and bareheaded in the sun until they were as well specked with "freckles" as a turkey egg—a pitiful sight it was to behold.

But the most touching sight was when all who had ration tickets were supplied and gone, leaving about a hundred desolate unfortunates outside the gate, with buckets, cans, gourds, etc., but no tickets to admit or entitle them to the remaining rations in the pots, as some food generally remains after the list has been supplied.

Mr. Sanguily stood in the gate and beckoned in the ones who were the nearest to death's door, and had them given "half and half," or half a ration each. But to look into the faces of those poor starving people, when each was trying his best to look the most miserable in order to be beckoned in for half a ration, was a sight that a lifetime can't erase from one's memory—no, never. The misery and desolation in Cuba have never been told, and the martyrs for her liberty are too numerous to be numbered.

Navasota, Tex.

[One can hardly fail to have his heart touched by such things as these. For one I feel proud that our dear Uncle Sam, although perhaps a little late, has freed the Cubans from the hand of the despot. May Christianity, enlightenment, and progress find their way to these benighted hearts.—ED.]

LARGE HIVES—OBJECTIONS.

Large Hives for Comb Honey; Faults of Large Hives as Compared with Standard Eight-frame Langstroth.

BY C. P. DADANT.

Now, Mr. Editor, I wish to mention the most weighty objection to large hives; and that is Doolittle's remark that, if too much room is given, or the queen does not fill all the breeding space, the bees will become accustomed to putting honey into the brood-chamber and will crowd her out.

Please take notice that this is only a comb-honey objection. Those who support small hives seem now to hold that they are needed for comb honey only, and Hutchinson has lately said (and I take note of it), that "for extracted honey the size of hive matters little provided it is large enough" (italics mine). This is virtually acknowledging that the large hive is absolutely necessary to raise extracted honey. Now when you rear comb honey, according to those who do not agree with me as to size of hives, it is necessary to keep the queen on only the number of combs that she can well fill with brood, in order to get a good storing in the supers. Very well; we are agreed, and I hold that this can be done with the large hive best, since it will accommodate from the most prolific to the poorest breeder. All it requires is a little attention, and you have the advantage of knowing the capacity of your queens and the chance of breeding from the most prolific. Is this too much trouble? It is a little more labor, and requires a little more judgment; but when you once have a populous colony it will be much easier to keep it strong in a large hive than in a small one, as I have shown you when speaking of wintering and breeding.

In some of your remarks in a previous article you ask whether it is not a great deal of trouble to add one comb at a time to the space of a colony. It is not absolutely indispensable to add only one at a time, and you may add two or three according to your opinion of the probable prolificness of the queen. One or two examinations during the spring ought to be sufficient.

Hutchinson has said, and still repeats, that queens are the least expensive part of a colony, and that it is better to keep all the hives and combs fully occupied than to use the queens to their greatest capacity. To us, in early spring, the number of queens on hand is the most important question; for we then nearly always have empty combs and queenless colonies; and I dare say that every bee-keeper has more hives and sets of combs on hand in spring than he has queens; and he is very well satisfied, and considers himself very successful if every hive is alive and every hive has a queen after winter. So it is the queens, the queens, that have the value to the apiarist after winter, and it is what the queens are likely to do that makes his prospect better or worse. That is why we want our queens, all of them, to do all they can for a large production of population, and we are quite willing

to run the risk of having to remove a few combs from the brood-chamber, if comb honey is wanted, when the queen is not able to fill all, especially as those combs, at that time, need not be idle long, for they are needed for whatever increase is expected or wanted.

By giving all our queens all the room they need, we achieve what we consider the most desirable aim—get the greatest possible number of bees from the number of colonies we have, in time for the harvest.

And, by the way, I have re-read my last article on the disadvantage in cost, and I find that I make the case altogether too strong against the large hive. I have figured it at twice the cost of a small one; but I want you, Mr. Editor, or your business manager, friend Calvert, to tell us just how much difference there would be in the cost between a hive containing 11 combs instead of 8, with one dummy, and made like yours, but with frames just deep enough to suit a hive made of 12-inch lumber. If I am not mistaken the Dovetailed, Simplicity, etc., are all regular-depth Langstroth hives, and are made of 10-inch lumber. Just figure them made of 12-inch lumber and just as deep as could be conveniently made out of this. They would be very near the size of ours, which are made of 12 $\frac{1}{4}$ and it seems to me, at a rough guess, that, with the dummy and all the enlarged supers, they would not cost to exceed 25 to 40 cents each in excess of your small hive. The interest on the money, and the sinking fund to pay them up in 30 years, would not make the additional annual cost to exceed the value of a pound of honey per year. What makes the hives expensive, as we build them, is the telescoping cap, the double back, the projecting bottom-board, etc.—a thousand and one little nothings which we use just because we are accustomed to them.

Now, Mr. Editor, somebody asks me whether I think that the large hives are going to "take," and become prominent. I will frankly tell you that I think not. Say what we may, the \$1.00 hive will sell because people go for cheapness. And if it were not a question of cheapness, but only of reason, does it follow that people would take the more reasonable course?

Do men chew tobacco because it is the best thing to do? Do our women wear tight corsets because they are more healthful? Do the Chinese bandage the feet of their girls because they will be benefited thereby? Do our little girls wear short skirts in winter and long hair in summer for their comfort? Why does a lady carry her pocket-book in her hand instead of having a pocket to her dress? Is it more convenient? Why does America take the Philippines and pay out twenty millions of her money? Is it for her moral or her pecuniary advantage? Nay, we are all more or less like sheep, and follow the bell-wether, whether she leads us right or wrong. Just see us now, throwing away our feelings, patting the British Lion, with the confidence of a child, forgetting that, less than forty years ago, he did all he could to promote secession and break up the Union. His cat-like paw is

velvety and soft just now; but look out for the claws, if we happen to reach out for a dish that he covets.

Hamilton, Ill.

[As I understand you, friend D., you prefer the large hives, even for comb honey, because their brood-nests are capable of equaling the capacity of the best queens; and that, whenever one is not able to fill the whole brood-nest, you contract the hive to her needs.

Now, here is a question I want to ask you: How many frames, of Quinby size, will your average good queens fill with brood, as frames are ordinarily filled? What I am getting at is this: Is the eight-frame single Langstroth brood-nest, in your opinion, large enough to accommodate the breeding capacity of the average good queens?

Our Mr. Calvert, who makes out our estimates, has figured on the two styles of hive you describe, and he estimates that the larger one would cost only about 40 or 50 per cent more than the smaller one. If that is the case, then you, in your preceding article, made a stronger case against the large hives than was necessary. It shows you meant to be entirely fair.—ED.]

EUROPEAN BEE-KEEPING.

Wander-Verein of the German-Austrian and Hungarian Bee-keepers.

BY F. GREINER.

The conventions of this association have always made a favorable impression on me. One reason is, perhaps, because I am a German myself; but I believe more so because not only the common people are greatly interested in them, but also the authorities of state and municipality have a way of showing their interest, which is at least pleasing and perhaps encouraging. The meetings are frequently led or conducted by some high official, perhaps a secretary of agriculture or his representative. This has some advantages. Although a president of this order can not be expected to be and is not at home on the subject of bee-keeping, still he understands the parliamentary rules better. He is not apt to be carried away with this or that subject. From his disinterested standpoint he can often better decide when to close a discussion. Personalities are not likely to creep in, etc. The fact that a man of high rank presides at such a meeting lends weight and importance to it in the eyes of the general public, and casts an edifying light upon the whole pursuit. Whatever may be said against the practice, the fact remains that the gatherings of the Wanderverein have almost always been conducted in a faultless manner. The fact that the government lends its help to the undertaking causes a better attendance; and when bee-keepers know that every thing will be done by the city in which the convention is to be held, that no efforts will be spared to make it pleasant for the attendants, and to help to make the whole a success, that also has a wholesome

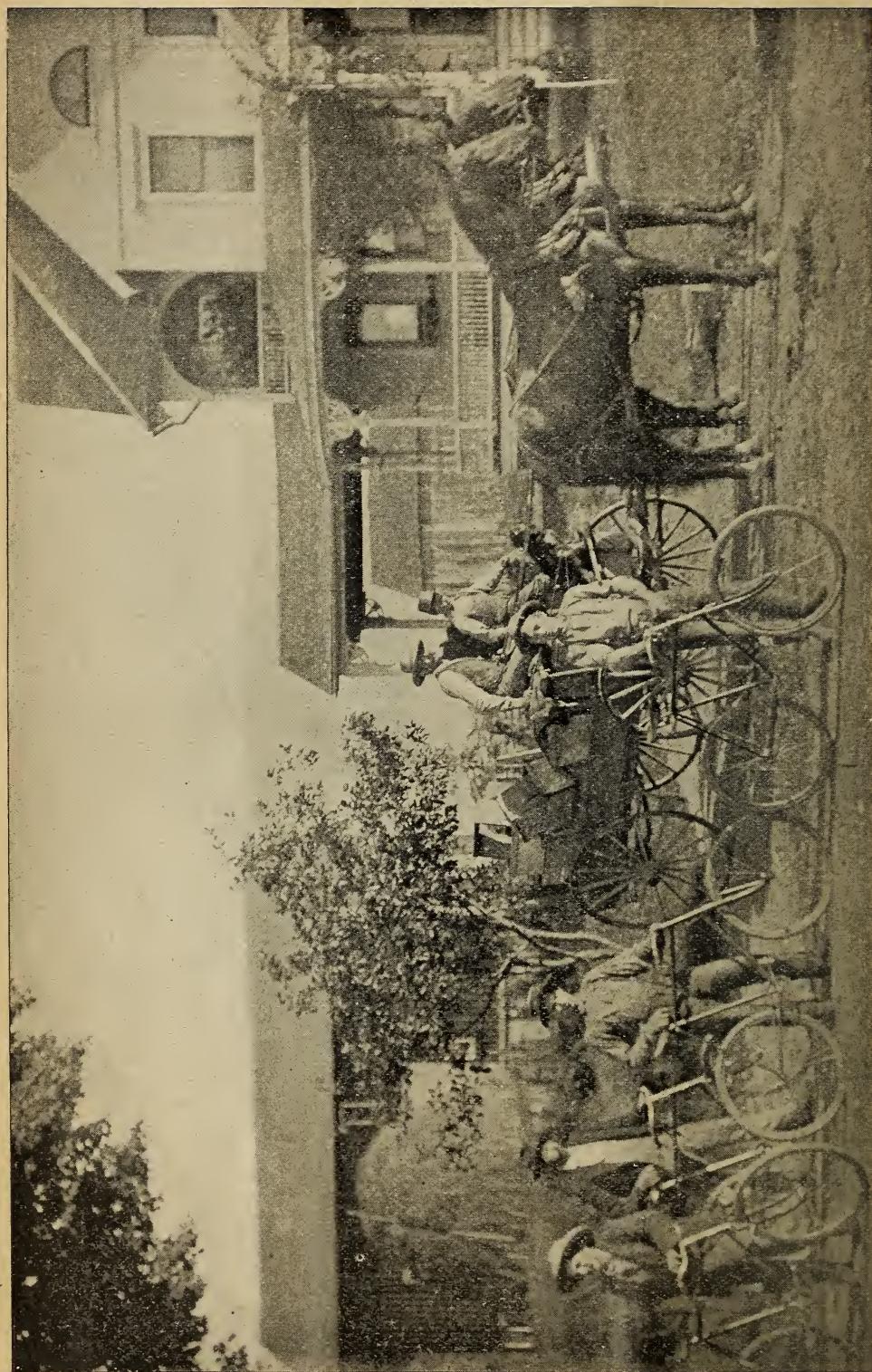
effect, and induces many to come to these meetings.

Generally the inhabitants of a city where a convention is to be held offer free board and lodging to all who prefer this to hotel board, and much is done to amuse the guests. How far this is carried, the reader can form an opinion from what took place at the Salzburg convention last September, and which I will here relate, translating it from the Leipzig *Bienenzeitung*. As there was only a forenoon session on the first day in Salzburg, the afternoon was set apart for sightseeing and amusement. Accordingly the great swarm of bee-keepers, over 200 strong, with Dzierzon at the head of the procession, carried on the shoulders of men, made their way to Castle Heilbrunn, in the vicinity of the city. After all the sights were taken in there, the guests were led on by the guides to a celebrated cave called the Stone Theater. The greatest surprise would meet them here. After all had entered, differently colored lights flashed up all among the rocks, and a grand illumination took place. The sweet strains of (as it seemed) angels' voices singing were heard in the distance, and coming nearer. As soon as this had ceased, the rocks, high up, seemed to open up, and the Dwarf King, in rock-colored dress, and with long flowing beard, appeared, and began to address the surprised listeners in poetic strains, welcoming them to Salzburg. No sooner had the king spoken than a multitude of cunningly dressed dwarfs (or perhaps so-called brownies) seemed to emerge from among the rocks. They all carried baskets filled with bouquets and flowers, with which they proceeded to decorate the bee-keepers. The surprise was a perfect one, and created a storm of applause. In company with the happy set of youngsters, the return trip to the city was then made.

There are still other features connected with the Wander-verein that materially add in making it a success, and wherein its members have a decided advantage over similar organizations here: namely, they receive every year an appropriation from the State, to be used for various purposes, but principally for prizes and premiums; for it will be remembered that there is always connected with the convention an exhibition of bees, hives, implements, literature, etc. The cities also often donate something for these purposes, sometimes ornamental pieces like silver cups and the like.

Furthermore the railroad rates are very low, in particular to members of that kind of organization that tend to improve and educate. Since the roads are owned and operated by the government it is a very easy matter to obtain these low rates. Even laborers are often carried for almost nothing from one part of the country to another. For instance, should there be a scarcity of laborers in certain districts at certain times of the year, the government at once makes an effort to equalize; and after the work is done the laborers are carried back to their homes for an insignificant sum.

When we take into consideration that distances in Germany and Austria do not amount to much compared with distances here in



MR. COGGSHALL AND HIS HELPERS READY TO START FOR THE OUT-YARDS.—SEE EDITORIALS.

America, we need not be surprised that the attendance at bee-keepers' conventions there is so much better than here.

Naples, N. Y., Nov. 30, 1898.

[If we could have government support, and if, in addition, the government owned the railroads, so that we could get low rates; if we could temporarily shrink Uncle Sam's domains to cut down mileage, perhaps we could have big conventions. It is easy to see why the Germans beat us on their large gatherings. —ED.]

DOOLITTLE ANSWERS DR. MILLER.

Egg-laying of Queens Dependent upon the Kind of Honey Produced.

BY G. M. DOOLITTLE.

I supposed I had annihilated that "arena" fitted up for Dr. M. and myself to fight in; but it seems that the good (?) doctor is bound to fight with Doolittle anyway, as a Straw (p. 869) in December 1st GLEANINGS would denote. After telling what Dr. E. Gallup says about a queen of his occupying 24 Gallup frames fully with brood, Bro Miller wants to know how I reconcile that with a statement I made, that 9 Gallup frames entertain the best queens to their fullest capacity as to egg-laying, and if Dr. Gallup's queen did not need nearly three times as much room. Well, my dear doctor, had you read the bee-papers more carefully during the past, and remembered what you read, you would have known that Gallup's 24-frame hive was worked for extracted honey, while Doolittle was talking about hives worked for *comb* honey. But I think I hear the doctor saying, "Has the working of a hive for extracted honey any thing to do with the capacity of the queen for egg-laying? or does the working for comb honey decrease her capacity any?" his eyes giving that peculiar twinkle they have at times when he is thinking to himself, "Guess I have got you this time." Dr. M., let me tell you something. I am not going back through musty volumes of old bee-journals to hunt the matter up to get exact figures, but shall tell it from memory. Up to 1874 I had thought that 9 Gallup frames would entertain the best queen to her fullest capacity, no matter whether the colony was worked for extracted or comb honey; for up to that time that was the greatest number allowed when working for either. In the spring of 1874 I read up on the (Adair) Long Idea hive, and became infatuated with the same. I made two of them, working one for extracted honey and the other for comb, these hives being made to hold 32 Gallup frames when the whole number was in. I selected two average colonies out of my nine-frame hives; and when the nine frames were pretty well covered with bees, and brood in some six or seven of the combs, I set each over into these four-foot hives. At the same time I selected another colony of about the same grade, to be worked for extracted honey on the tiering-up plan, and one to be worked for comb honey on the nine-frame "side and

top box" plan I had used before. In due time the two long hives were filled out with the full 32 combs, with sections on the one for comb honey, and extracting going on every third or fourth day from the other, as used to be the style under which extracting was done. In the tiered-up hive, the queen was kept on the 9 frames by means of a slatted honey-board, and the one worked on the side and top-box plan manipulated as well as Doolittle knew how. Now for the result: Before the basswood harvest arrived, the queen in the long hive, worked for extracted honey, had brood in every one of the 32 combs, to the amount of some 18 or 20 combs full of brood; while the one worked for comb honey, having 32 combs, had brood in only 18 combs, the same amounting to only about 9 frames full, the rest of the combs being partly occupied with honey, which ought to have gone in the sections, and would have gone there had this queen had only the 9 combs for her brood-nest. So the queen from the extracting-hive was laying about 5000 eggs daily, as Dr. Miller says, to where the one in the comb-honey hive was giving only about 2500, each evidently laying to her fullest capacity. What made the difference? There is something about extracting honey that causes bees to *feed* a queen in such a way that she will give double the eggs, if she has comb room, that she will when no extracting is done, and thus a queen is coaxed to produce and develop all the embryo eggs she has in her ovaries, in the shortest possible time, while under normal circumstances she will be laying up to her fullest capacity when not producing half the number of eggs she does under the stimulating influences which come from extracting.

All four of these queens were reared during the swarming season of 1873, so they were less than a year old when the experiment was commenced; but the one in the long extracting-hive died of old age that same fall, while the other three lived and did good work the next season. I have tried nearly the same thing several times since, and proven to my entire satisfaction that a queen will occupy double the number of combs with brood, where extracting is being carried on, as often as the combs are filled with honey, that she will when her colony is worked for comb honey.

In passing I will note that the hive worked for extracted honey on the long-idea plan gave 566 lbs. surplus, while the one worked on the tiering-up plan gave about 400 lbs., thus showing that I had only 166 lbs. more honey as a result for double the brood reared. The long hive worked for comb honey gave only about 50 lbs. of section honey, with the 32 combs nearly solid full of honey, while the one worked on the side and top storing plan gave 309 lbs. of section honey, with enough below to winter the colony on. The average from the whole apiary that year was 166 $\frac{2}{3}$ pounds from each old colony in the spring, all of which was comb honey, excepting that from the two colonies worked for extracted, the whole number in the apiary in the spring being 69.

Now just a word more: I do not get, on an

average, any more brood in the ten-frame Langstroth hives at the out-apairy than I do in my nine-frame Gallup hives here at home. To be sure, I often have brood in the whole ten frames, but not more than enough to fill from six to seven full, while the nine Gallup frames are *full* clear out to the corners, as Ernest says the Holy Land and Cyprian queens will do. Now if, when working for comb honey, I get to the amount of only 6½ Langstroth frames of brood out of 10 frames, or 9 Gallup where I use 12, 18, 24, or 32 in a hive, will Dr. Miller say that 9 Gallup frames or 6½ L. frames will not entertain any queen to her fullest capacity in this locality? And allow me to say, in a *very friendly* way, that I am inclined to think that what is applicable to my locality will come very nearly the truth in other localities, if others will work along the same lines Doolittle does, and experiment, and note things as carefully.

DOOLITTLE ANSWERS THE EDITOR.

And now I come to another Straw (p. 870) where the editor wishes me to explain. And that "twinkle" in Dr. Miller's "eye" caused him to wish the explanation. It's not very often that the doctor gets in two "twinkles" at Doolittle in one batch of Straws, as he has this time. The editor points me to his answer to "Straw regarding Dadant's statement to the effect that queens will lose time in hunting for empty cells" where she has just room enough for her needs, but for the life of me I can not tell whether he agrees with Dadant or not. As Dadant uses only *large* hives, I doubt whether, from practical experience, he is capable of telling just how much a queen hunts about for room, unless he has seen her doing so, because his large hives allow the bees to crowd the queen with honey (when working for section honey) by their starting storing in the combs below instead of entering the sections *promptly* with the beginning of the season, as they should do. If the queen does so hunt I have never been able to detect her so doing; for where frames are filled solid with brood the young bees emerge "solid," and so she keeps on following the brood as it emerges, in regular order. But if I read the editor aright he wants to know if queens reared by the plan given in "Scientific Queen-rearing" do not need more room for egg-laying than those formerly reared by old plans. In answer to this I will say that, as the older readers of our bee-literature will remember, up to the eighties, and for years, I used only six and seven Gallup frames to the hive, and a number of articles can be found in the *American Bee Journal* headed "Those Six-frame Hives," in which I showed how I succeeded in producing tons upon tons of comb honey by the use of from six to seven frames for brood. And even to-day, where I find a queen that does not fully occupy more than six Gallup frames at the beginning of the honey harvest, that colony has the other three combs taken away from it, as years of experience has taught me that a lot of empty comb in the brood-nest, at the beginning of the honey harvest, is the greatest drawback toward a successful result in comb honey of any thing I have to contend

with. But I am prepared to say that the number of colonies shut on six and seven brood-combs at the beginning of the honey harvest is not nearly so great as it was before I practiced the plan of rearing queens as given in "Scientific Queen-rearing."

Borodino, N. Y.

[While Doolittle does not say so in so many words (owing, no doubt, to his modesty) I infer that queens reared by his method require larger brooding-space than queens reared by the old ways—at all events, that has been our experience. A honey flow, feeding, or large cells, seem to be important requisites.—ED.]

SECRET OF SELLING HONEY.

A Good Article, and as Cheap as Sugar.

BY S. F. TREGO.

Would it not pay a great many bee-keepers, who are properly situated, to aim to produce more honey, and sell it cheap enough so that their neighbors can afford to eat it every day? I know that 10 cts. per pound for comb honey is very cheap from the bee-keeper's point of view; and, in fact, I would not care to produce it for less; but put yourself in the place of the ordinary workingman and you will think it is, to say the least, high enough. I know that not a tenth of my neighbors have honey once a week, and yet they all use sugar every day. How do I propose to get them to use more honey and less sugar? Simply by producing a good article of extracted honey, well ripened, and selling it at a price that will compete with sugar. That is the conclusion I have arrived at. I got a crop of something over 350 pounds of nice heartsease honey from my 6 colonies (spring count), and have been selling it at 15 lbs. for \$1.00 (granulated sugar is 16 lbs. for \$1.00). I was out half a day and sold 96 lbs., and since then I have made no effort whatever to sell. It just sells itself. Nearly every time I go to town some one will ask, "Have you any honey left?"

"Yes."

"I want a dollar's worth."

One day I was in Cable, and sold \$3.00 worth without trying, and last night I went over to a neighbor's and he gave me an order for a like amount—one for himself and two for another man. This leaves only 15 lbs. to sell yet, so the fun is about over for this year.

When that goes it will be 300 lbs. sold for \$20.00, which is pretty good for 6 colonies, when we consider that the clover was a total failure and that they were increased to 17 colonies.

This honey-flow was a surprise to us, as many colonies had but five combs when it began; but by the time it was over, all were full.

We have great hopes for next year. I am putting up a honey-house, 10 x 12, two stories high, that will be a great help in handling the crop at the least expense. It is situated at the lower side of the apairy, and an inclined plane

will lead to the second floor, where the extractor will stand. From there the honey will go through a strainer and downstairs by a pipe into the barrels, which will be well waxed, and will stand on strong benches high enough from the floor so that the honey can be drawn off into 15-lb. pails.

I have taken great pains to tell all who buy where and how to keep honey, and how to liquefy granulated honey; but another year I shall have some of those little pamphlets put out by the Roots, as they explain it better than I can.

The main point is good honey. If it is good, and cheap enough to compete with sugar or molasses, the common every-day people will have it as soon as they learn what it is.

One patron, when he bought his second lot, said it was about as cheap as molasses, and a lot cleaner. His next neighbor, in ordering his second lot, said it was cheaper than buying so much sugar.

Swedonia, Ill.

[It is true that not enough emphasis has been placed on the quality of extracted. It should be well flavored, thick, and cheap enough to compete with sugar. When these conditions are secured, honey will sell of itself. Why, my "taste" has become so that I can't like any thing but the best thick honey. Let the public once acquire this taste, and if you have the goods to supply it they (the goods) will sell without any effort.—ED.]

A PURE-FOOD LAW MUCH NEEDED.

How May it be Secured?

BY F. A. SNELL.

The matter of pure foods is of vast importance to every citizen. It is one in which the old and young, rich and poor, have a mutual interest; and if such a law could be secured and enforced the benefits would be mutually shared. I have read with interest what has been printed in our journals on this important subject. I think some of the writers have not taken as broad a view of this matter as should be the case. The question is a broad one. It has been considered, it seems to me, too much by bee-keepers as bearing on their interests as honey producers and sellers. That is all right, I think, so far as it goes. The producers of pure maple syrup and sugar are wronged the same as are bee-keepers and others who are legitimately engaged in producing pure food products on through the list; but it must be remembered that the above referred to parties composing but a very small part of the whole people of our country. In order to secure the desired law and its enforcement, the broad and correct view must be taken that the called-for law is for *all* our people, as it truly should be, and embrace all food products.

It must be evident, to every one who has given the matter any intelligent thought, that the health of our people has been much injured by the miserable imitations of pure

foods, and medicines as well, which we have bought and used, paying the price at which the pure goods should be sold for. We know that people have been made sick by the fraudulent mixtures when eaten. A national law would be very desirable; but there are doubts as to such being secured very soon. Every State not now having a good law of the kind should pass one at the earliest opportunity. As many of our State legislatures are now in session an effort should at once be made with them for a good law on this matter of pure foods, etc. I think a State inspector, to see to analyzing samples of these products, and making collections from different manufacturers and dealers, down to the retail dealers, or grocers, should be chosen. He should have, I think, full power to commence suit against any party who may be known to have on sale such goods. A fine by law should be levied on every one found guilty of its violation. Suspicious goods could be sent to the inspector for analysis, by any citizen of the State. Imprisonment for second or later violations of the law would be advisable. With such a law, every one selling bogus goods would be held responsible, and would soon learn that the people had rights that dealers should respect.

France, England, Germany, and some other countries have had such national laws for years, and such have been enforced, including imprisonment, to the great satisfaction and benefit of the masses. In our State we have fair laws in this matter, but I think they should be made more complete and far reaching, with an imprisonment feature, and the appointment, or, better, the election, of an inspector by the people. Evidently we should have the best law that can be framed for the protection of our people against unscrupulous greed and dishonesty. I believe that, to secure the much-needed legislation, not one or two industries, or a few that are now wronged, will by delegates or committees be able to do much; but when we unite the interests of *all* our people for the rights and best interests of the masses, we may win. We are all consumers, and that is where our strongest points of argument and reason will best apply and have the greatest influence. Such a view is far above any thing in the line of class rule or class interests. With a clear, well-directed effort in the lines above suggested, by a large representation, it seems to me any respectable legislature would do what would be so reasonable and just as to pass a good pure-food law, and thus give relief to a long-suffering people.

The above is only a little of what can be said on this all-important matter. I hope many others who can do much better than I will give their views and throw more light on the subject. Practical ideas and united action, with a move along the whole line upon the gang of adulterators in securing pure-food laws and their enforcement are now seemingly more needed than ever before. Every article used for food should be branded just what it is, and sold for such. The honest producer puts up pure and healthful goods, and is forced to sell them at little or no profit, while a good margin is made upon the bogus. The

innocent consumer often buys the inferior, and in good faith that it is pure, with very few exceptions perhaps. He gets the health-destroyer when he supposes he is buying the health-preserver or health-improver. Thus one might continue in naming the wrongs from which we suffer by these infamous abuses committed by the adulterators of food products.

Milledgeville, Ill.

BEE-VEILS WITH A FACING OF HORSEHAIR.

Quotation-marks that Don't Quote; Bamboo Canes on Lake Geneva.

BY F. L. THOMPSON.

Dr. Miller asks about horsehair veils. There are none, I believe, that have any more than a facing of horsehair. I have used one for two seasons. The facing is good yet. Lately some holes developed in the cotton tulle that forms the body. The horsehair is about equal to black cotton tulle for seeing through, and has the advantage that it never gathers in folds. I do not know how it would compare with silk tulle, having never used this. If the latter is better, why couldn't it be kept stretched in a little frame set in the veil? How about the fabric called "illusion," sometimes used for ordinary veils?

While literary infelicities are up, I want to ask Dr. Miller and his careful imitators, Gleaner and Blier, why that memorandum-book style of saying "in *Review*" instead of "in the *Review*." This is a small matter, but they are so persistent in it as to powerfully excite my curiosity. Surely, they don't mean that the former phrase is correct, nor the latter incorrect.

And the Chicago breezes fanned somebody's "brow," they did. When I read that, my "skin" experienced a creepy "feeling," something like that felt when I see a "young man" wearing his "hat" on one side of his "head," or a "girl" chewing "gum." Verily, the use of quotation-marks that don't quote has become fearfully and wonderfully extended. I could cite many such examples from the bee-journals of the last few months. While admissible in some degree, such extreme applications are *never* found in good literature. Then there is the wooden and commonplace use of the exclamation-point, etc. But what riles me particularly is to have the proof-reader interfere with my punctuation. Beyond certain general rules, the niceties of punctuation, and particularly the use of the comma, are, according to the best authorities, matters of taste. I suppose the proof-reader gets so used to supplying punctuation that he does so indiscriminately. But when he sees that one has his own notions of punctuation he ought to confine his work to the correction of real errors, applying only such rules of punctuation as are universally used in good literature.

Here is an item for A. I. R., which I translate from *L'Apicoltore*, which translated it from some German paper. Herr Reepen, a well-known bee-writer, has been visiting Ed-

itor Bertrand, of *La Revue Internationale*, who lives on the shore of Lake Geneva, at Nyon, Switzerland. He says:

"Great was my surprise to find in the magnificent garden, which descends to the edge of the lake, canes of bamboo of a height that I have not seen equaled outside of the Indies. On inquiry I learned that it was a variety of bamboo that does not fear the rigors of winter, indigenous in the high mountain regions of Japan, and probably not existing in any part of Europe. Now, thanks to the kindness of M. Bertrand, a healthy shoot may be found here in Oldenburg, and is prospering wonderfully. I do not doubt that it will successfully pass the northern winters, as the temperature at Nyon, too, often descends to -13°R. [$+3^{\circ}\text{F.}$] Nearness to running water is a condition of its growth; and when this is not lacking, such a variety of bamboo will become an incomparable ornament of parks, gardens, etc. The dusky-green color of its leaves is especially remarkable, not changing even in winter."

Montrose, Col., Oct. 26.

THE DOOLITTLE METHOD OF QUEEN-REARING.

How to Rear Giant Queens.

BY C. T. BONNEY.

Since the Oregon went around Cape Horn and whipped the whole Spanish fleet, Oregon doesn't seem as far out of the world as it did before. Now that peace is declared I thought a red apple from Oregon might not look bad in your journal.

I have noticed considerable in GLEANINGS lately about the Doolittle method of queen-rearing, and I should like to drop a mite in that direction in hopes that some brother bee-keeper will experiment along the same line. I use the Doolittle method because I can raise larger and better queens by that process than any other; and what I have to say in regard to it is only with the hope that others may have the same success with it that I have had. I know quite a number of the bee-keepers who use this method are old-timers, and well versed in bee-lore, yet I believe not all of them have caught on to the greatest advantage in the Doolittle method, which with me is being able to raise the largest queens that I have ever seen—larger than I ever saw issue from natural swarming. When I began to handle bees I was not long in learning that they sometimes build small queen-cells, and from small cells come small queens, and small queens almost always head a small or weak colony; while large queen-cells bring large queens, and large queens are almost invariably prolific. It occurred to me one day that I might raise all extra-large queens by making the queen-cups larger, so I accordingly made some form-sticks one-third and in some instances one-half larger than an ordinary queen-cell, and found to my great satisfaction that the bees would draw out the length in proportion to the diameter, and thus I have raised the largest and most prolific queens that I have ever seen.

I made up my mind some time ago that the editors of the bee-journals had started in to fence the whole bee-fraternity, but their dominion hasn't reached Oregon, so we had to devise one of our own. I am willing to admit that the slatted fence separator is better than any of the old styles, yet the one I use suits me better, which is a fence made of galvanized wire cloth, eight meshes to the inch, and the same width of tin separators. When perforated with about three dozen $\frac{1}{4}$ -in. holes it allows as free passageway as I think is necessary, and each bee can see what its neighbor is doing in the adjoining section, and it allows the freest circulation of all. I find that bees will work evener in the supers with these fences, and will ripen the honey quicker than with any other. It is easily cleaned, and will last a lifetime; besides, it has an advantage over all other separators in extracting unfinished sections. Two wide frames can be dropped in each basket of the extractor, and the honey throwed out, in less time than it takes to write it, and that without removing any sections. If any have a patch of cappings in the center a thin knife can be run under the wire fence, the cappings removed, and you can see just what you are doing all the time. Honey can be extracted in this way almost as fast as from the brood-frames, depending, of course, on how near the sections are finished.

Woodburn, Ore., Nov. 21.

[I am inclined to think there may be something in the idea of large cells producing large queens. I should like to hear from Mr. Doolittle on this point.—ED.]

BEE-STING DEATH.

An Interesting Account of the Results of Stings on a Horse.

BY GEO. L. VINAL.

Perhaps this article would be more appropriate for a medical journal. Thinking it might be interesting to the readers of GLEANINGS, I will give an account of a case that came under my observation.

September 7th, about 2:00 P.M., one of the men was passing by some hives which were about a hundred yards from him. He had passed by in the same place frequently all summer. It was a partly cloudy and very muggy day. I had come from the bees before dinner, and saw no robbing. They were as quiet as usual. For some cause the bees attacked the horse. The man succeeded in getting him partly unharnessed, when he cleared himself from the wagon, when he and the man took French leave. The horse got about 200 yards away from the bees, and stopped. I was called, and found the air full of bees. Covering my head and face with netting, I went and led the horse into some bushes, and then to the barn. I got to the barn at 2:25. No bees followed. The horse was a large one, in good condition, and would weigh about 1200 pounds. His head, nose, ears, neck, and

body were pretty well covered with stings. A strong wash of ammonia was made, and applied over him. At this time he did not appear to be in much pain, and stood quite still; but in about ten minutes he began to shake his head, and respiration began to increase. I took his pulse, and it had increased to 50 per minute. The normal pulse of a horse is 36 to 40. The normal respiration is 10 to 12, and the temperature is $98\frac{1}{2}$.

At 2:45 the pulse was 60, respiration 30, temperature 102. The animal would stretch, and urinate of a highly brown color, with frequent evacuations of the bowels, of a thin and watery consistency. At 3:00 P.M. the above symptoms had increased in frequency. The pulse was 80, respiration 60, temperature 104, with marked symptoms of delirium. He would throw himself on the bedding; would jump up again, and plunge and tug at the ropes that he was fastened by; would whinny in a loud shrill voice. These symptoms lasted until 4:15, when they began to abate, and the respiration began to be somewhat stertorous; he also began to show paralysis of the extremities.

At 6:00 P.M. he was unable to get up. The pulse had decreased again to 60; the temperature had increased to 105. The respiration decreased to 40, with the stertorous breathing more marked.

These conditions continued in a more marked degree until he died, at 9:30, or about seven hours after he was stung.

An autopsy was made the next morning at 7:30, or ten hours after death. The whole alimentary canal was congested; the lungs were gorged with blood; the cavities of the heart were filled with clotted blood of a dark viscid consistency, and all of the muscular tissue was filled or congested. The coverings of the spinal cord were congested; also the covering and substance of the brain.

We are told in the bee-journals that the poison of the bee is formic acid. We are informed in scientific works that it can be extracted from the ant, the caterpillar, and numerous other sources, and that it can be produced chemically. In some medical works we are told that it is used in a diluted form, applied to the parts of a paralyzed limb; that its application increases circulation and a prickling sensation over the parts it is applied to. Now, will some of the shining lights of "beeology," who are scientific medical men and chemists, please inform us why that strong and healthy animal should die from a few stings in about seven hours after he was stung, with all symptoms of paralysis?

Charlton City, Mass.

W. H. A., S. C.—We would not advise you to move your colonies at this season of the year. As long as the bees can fly nearly every day you might lose half your bees by removing to the porch mentioned in your letter. If you lived, however, in the North, where the bees could not fly for a period of three months, the change could be easily made.

RAMBLE 158.

Bee-keeping in Northern California.

BY RAMBLER.

We were in a mining town, where the necessities of life ruled high in price, and the food question was of some interest to Mr. Levering and myself. Five dollars a week was the regular price for board; and we entertained the idea that, with proper economy in baching, we could save enough to pay us for indulging in that mode of life. In fact, I was so used to it that I preferred it; and in times of yore the judge had practiced it. His late

department. But with the very first breakfast I knew something was the matter with the judge's gastronomy. He did not say much, but the cakes were evidently lacking some ingredient his grandma used to insert.

Now, some of the leading bee-men in California, and some Eastern bee-men, and even John Calvert, had all eaten my famous cakes, and pronounced them good; and now here in this lonely mountain fastness the judge turned his plate against them. I was so disappointed that my interest in pancakes waned from that moment, and I stopped their manufacture.

Some mornings after this stoppage the judge surprised me by remarking that he was pan-



BACHING IT AT AN OUT-YARD IN A LONELY MOUNTAIN FASTNESS.

brother was a bach, and, having all the tools necessary for promoting the enterprise, why not?

We accordingly set up our household gods in the little old cabin near the apiary. The judge occupied one corner of the cabin with his bed, while the other side and corner were occupied by an ample fireplace and stove. The dormitory where I spread my folding cot was in a brand-new building termed the vinegar-house. The late Mr. Levering made quantities of the latter beverage from honey, and there was 18 barrels of it on the premises. I felt perfectly safe in sleeping in the room, on account of the strong "motherly" influence that made itself known to the sense of smell.

In cooking we at first divided the honors, and I started in blithely upon the pancake

cake hungry, and he believed he would make some. It is needless to say that my interest in that department revived, and I was all attention to the new mode of manufacture. The second move he made, however, commenced a series of discouragements to my eating them, for he used soda, which I do not like, and so strong that the odor of the cakes while baking had a stunning influence upon the flies, which were plentiful in the room. Then I could see by the way they bellied down in the center that they would be as tough as a piece of leather. Did I eat any of these cakes? No, sir! I was anxious to live through the summer, and I resisted every time the judge passed the plate to me. He was evidently disappointed at my refusal, and proceeded to dispatch them himself. Now, some bee-men and others have an idea that the

judge is a feeble man, and not long for this world. I was tintured somewhat with the same opinion until I saw those flat soda pancakes disappear. I immediately made up my mind he was good for thirty years more of life. He is now 71. Why, land sakes! you all know what a strong stomach a corn-sheller has for digesting things. Well, a Levering pancake would give it the colic in five minutes. I really think the effect upon the judge was distressing, for he never became pancake hungry again during my residence in the neighborhood, and it was very fortunate for him that he did not. We silently, but by mutual consent, dropped the subject.

In nearly all other matters of cookery the judge displayed decided talent. I admired the rolling-pin he used when making biscuit, and have sketched it for the benefit of the reader. In its season we had much fruit on our table, and at the end of six months' baking we found the expense was \$1.66 per week. Now, 88 cents each per week is not slow for economy. The judge was looking out all the

bees. As this was mostly comb honey in large 12-pound boxes the task was an easy one, except that, every time honey was placed over the brood-nest, the back door and top of those Harbison hives had to be retucked with paper or rags.

It was well into June before the bees commenced to gather honey, and this came from the first crop of alfalfa. While in Southern California five or six crops are harvested per annum, and always cut just as it comes to the blooming-point, here there are but two crops; and, fortunately for the bee-keeper, it is allowed to stand two weeks in bloom. The first crop yields more honey than the second, and with less admixture of honey from other sources. Our honey from this first crop was almost as white as sage honey, and of fine flavor. The second yield, in August, was less in quantity, and darker in quality from being mixed with honey from blue-curl, locally known as tar-weed, and known in Southern California as flea-weed or vinegar-weed. It secretes a dark honey having a strong disagreeable flavor. There were acres of it on all waste places in the valley. The bees commenced to work upon it just as soon as the first crop of alfalfa had been harvested.

When I saw indications of the coming of the second yield of honey from alfalfa I extracted all "tarweed" honey; and, although it was nearly all unsealed, it was ripe enough to commence to granulate in the tank in a few days.

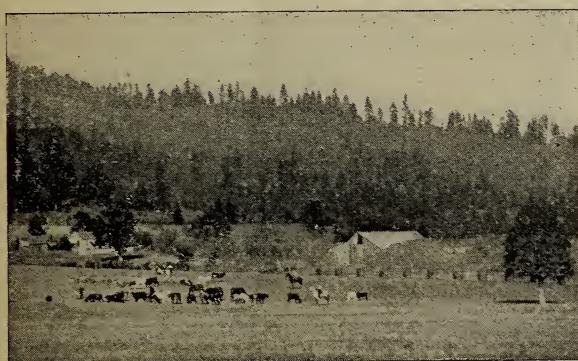
The removal of over a ton of this dark honey enabled me to secure a better grade of honey from the second crop of alfalfa.

The only admixture thereafter was a small amount of tar-weed honey.

Sweet clover was also a small factor in our honey production. The late Mr. Levering went east a few years ago, and upon his return be brought with him the seeds of sweet clover, motherwort, catnip, and other plants, for introduction here. The sweet clover took hold of the soil real well here, and, after a few years of trial, Mr. Levering wished he hadn't done it, and tried to eradicate it; but it was too late, for it is scattered more or less through Scott Valley, and is considered by some an obnoxious weed. From my observation the bees work upon it industriously. Mr. Levering was passionately fond of flowers, and his little cabin was surrounded with them in great variety, and his place was noted for its beauty.

The season was an extremely poor one for comb honey. If we had depended upon that for our income we should have had to economize still further in the household expenses.

The late Mr. Levering had progressed far enough to commence the use of the $4\frac{1}{4} \times 4\frac{1}{4}$ sections. The upper surface of a Harbison hive is not easily fitted with these sections, and Mr. L. put them in one at a time, tiered up three in height, with no crate to hold them.



CHAPARRAL THICKET.

time for the interests of the heirs of the estate; and as long as he and I were satisfied with the board the heirs ought to be; but, ten chances to one, the judge will, in the end, get no thanks, but kicks instead.

Our honey season started in somewhat slow, and with some elements of discouragement. The early fruit-bloom did not yield honey, neither did the manzanita, which is quite abundant here. The mountains are also covered with chaparral, which, I am told, yields some honey, but it failed this time. Chaparral is a dense growth of bushes on the mountain-side, and they are so interlocked that it is next to impossible for a man to find a passage through it. It has a small white blossom, but I doubt whether it yields much honey at any time. While my nearest neighbor rounded up his herd of cattle, sheep, and his family, for a photo, I found that I had in the background a very good view of a mountain covered with this growth, and it will give your readers an idea of the appearance of chaparral.

Owing to rain and cool weather, several hundred pounds of old honey was fed to the

Quite a number of hives had these sections still in place all empty, but glued tight. Well, now, you better believe it was a job to get them out without breaking them; and if Mr. L. could do it when they were filled with honey, and not break them, he had an exemplary patience; and if he could handle those sections one by one, and get them out of ten hives per day, he was a rapid workman.

To work the sections without too much strain on my nervous system, the judge and I devised a crate to hold 18 sections, and put on 100 of them; and at least 900 of the sections in those crates were filled with drawn combs. We found quite a difference in the workability of drawn combs. If the bees had drawn out a comb and left it with no honey in it, there was hard ribbed edge to every cell, that they were loath to use; while if the comb had been filled with honey, and extracted, or if it had been recently eaten out by the bees in the process of feeding, they were more liable to get to work upon it. In the former case the ribbed edge needed to be trimmed down or leveled; but with all of our drawn combs we were barely rewarded with more than 800 lbs. of honey in sections.

The new combs that were fitted into our extracting-frames were neglected in the same way by the bees. Two new combs in a super, with five old ones, would in many instances be entirely neglected, while the old combs would be filled with honey. I have seen this same preference shown by bees in Southern California. I attribute it to the fact that an old comb is a warmer surface to work upon. It retains more or less heat from the brood-chamber, while the new comb retains none. This preference is also shown more where cool nights prevail, and where the queen is not prolific enough to fill the hive cram full of bees. Several conditions seem favorable for such a state of things, and we had them all in full force in this apiary during the past season.

It seemed that, while the judge and I were striving to impress the heirs of the estate with the importance of bee culture, and trying to get a large yield of honey and a good amount of cash, the bees resorted to many ways to baffle us.



HONEY IN PLAIN SECTIONS PUT ALL OTHERS
IN THE SHADE AT THE MARLETTE
FAIR; DEEP ENTRANCES.

I tried the plain sections and fence this season. I got my supplies from Mr. Hunt, Bell Branch. I like them very much. I shall use more next season. The honey looks much nicer in plain sections. My honey put all the others in the shade at the Marlette fair. I think I should like the fence a little lower than the sections. I noticed this fall the bees glued the space full so you could not look into the super. I think I shall cut mine down

$\frac{1}{4}$ inch. Would it not be better to have the slats a little further apart so the bees can pass through? I tried the S fence by holding it at the entrance when the bees were at work, but not a bee went through, either coming in or going out. I think the deep entrance is all right. I made mine this year $\frac{1}{8}$. My old hives were $\frac{3}{8}$; and as soon as it got pretty hot the bees hung out quite badly. I then put strips $\frac{3}{8}$ inch under the hive (sides and back), and the bees went to work, and bothered but little after that.

I like GLEANINGS very much in all its different parts. I should not like to do without it.

WM. STILES.

Burnside, Mich., Dec. 5.

[You will see in our Dec. 15th issue that the fences for 1899 will be $\frac{1}{4}$ inch narrower at the top and bottom, and that the slats themselves will be a little further apart than last year. It is true that, in some cases, the bees filled the spaces above the cleats on the last-year fence with glue. While there are only occasional reports of such propolizing we thought best to make a change—make cleats come flush with the tops of the slats.—ED.]

MY APICULTURAL CREED; GOLDENROD A FAILURE; LARGE HIVES; T SUPERS; TEN-CENT COMB HONEY, ETC.

The honey crop was a perfect failure here this season. A sixty-days' drouth, with the exception of three local showers during May and June, did it up.

I believe goldenrod has always received more praise than it ever deserved. It is very abundant here, but it is seldom visited by bees. During ten years I have seen bees working on it but four times.

I believe in Dadant's arguments for large hives. My hives are nine-frame Langstroth.

I am a believer in Dr. Miller's T tiers and section cases. I don't believe they will ever be excelled.

I believe your fence will be a success with men who make a living by bee-keeping; but with a majority it will never be used.

I am a small bee-keeper. I follow, never lead. It is a side business with me; but if I were going to make any change in the size of sections I would make five tiers fill a L. section case, say $3\frac{1}{2} \times 5$, and just wide enough so each section, when well filled, would hold one dime's worth of honey at the rate of $12\frac{1}{2}$ cents a pound. My reasons are these: A dime is a standard coin, easy to make change, easy to sell. Almost any person can raise a dime who wants honey; and $12\frac{1}{2}$ cents is as near a standard price as any thing can be. When I was a small boy we lived near Wooster. My mother bought honey of a neighbor at $12\frac{1}{2}$ cents a pound, and I went and took it home. She also got some honey from the same neighbor at \$1.00 a gallon. It was candied, the first I ever saw. These things occurred in 1832. Taking prices then and now, and for ten years or more, I think $12\frac{1}{2}$ cents for honey is as near a standard price as a dime is a coin; and I believe such a section would meet with general favor; and, to use a nursery-

man's language, when a fine fruit is brought to notice, it "would fill a long-felt want."

AN EXCELLENT METHOD FOR STOPPING ROBBING.

I will give you my plan of stopping robbing. Whenever one hive commences robbing I take the weak hive, the one that is being robbed, and set it in some other place. I then take one of my strongest hives and place it where the robbed one was. I do this in the evening. Next morning early the robbers go to work. The robbers always commence business early. But they meet a powerful resistance, and, after fighting awhile, give it up. If one powerful hive did not whip them out I would give them another. But I never had to give a second one. This is original with me. It has always worked successfully.

You always want to know what your readers think of your journal. Well, my opinion is you can't make any improvement.

JOHN BARFORD.

Cross Keys, Ga., Dec. 13.

SWEET CLOVER.

I have always thought that one writing on any subject ought to have a practical knowledge of the subject. I am more confirmed in this since reading the letter written by L. W. Sawyer (see p. 893, Dec. 1st issue). He certainly doesn't know what he is talking about. One would naturally suppose, by reading his letter, that he was a large land-owner with cattle upon a thousand hills, and that sweet clover had become a great nuisance to him, when the facts of the case are he doesn't own a foot of land, but rents just one acre upon which he raises a few beans and potatoes, and has about 40 colonies of bees. There is no sweet clover in this country, to speak of. I will agree to wheel all there is within ten miles of Mr. Sawyer's lot, on a Daisy wheelbarrow, and I don't think it would make a load. Now, Mr. Sawyer is generally considered an honest man and a good citizen; and what in the world ever made him slop over in that kind of a way I don't know. Sweet clover may be a bad thing, and it may not. I am just like Dr. Miller in one respect—I don't know.

REPAIRING BRUISED COMB HONEY.

I have never seen any thing in GLEANINGS in regard to soldering broken sections, and I just wondered if any one else had ever got on to it. When I am casing up honey, if I punch a hole in a section it is ruined as first-class honey, no matter how nice the section in other respects. One day I was working near a hot stove, and broke an exceptionally nice section. I picked up a case-knife and held it on the stove until it was quite hot, then smeared it over the hole, when, presto! the hole was closed good and tight. It left a thin covering of wax over the honey that made it as good as ever. Since then I have saved a good many dollars' worth of honey from going into the third-rate lot. If the hole is very large I drop on a small piece of white comb from an unfinished section. Try it. E. A. EMMONS.

Tampico, Ill., Dec. 20.

VENTILATION AFFORDED BY FENCES.

I don't see any aptness in R. L. Taylor's illustration of a wicker chair in a room. It doesn't fit the case. If he wants it put in epigram, here is one that is more of a correct simile: Which will be better ventilated, a box or a crate standing in a room with a window or door open? and if the room be filled with boxes and crates, which are better ventilated? Moreover, ventilation is sidewise as well as vertical, even naturally, to say nothing of the currents caused by the bees fanning. Can not a room be ventilated by opening a door in the side nearly as well as by opening one in the floor or ceiling? Hence I agree with you, and not with Dr. Miller's Straw on p. 825, Nov. 15. Monterey, Cal.

A. NORTON.

HONEY-LEAFLETS NOT A SUCCESS FOR SELLING HONEY.

In GLEANINGS for Nov 15 you ask if the honey-leaflets have been a success in selling honey. Not with me. I don't think one in ten reads them. I have never thought the name was suitable—sounds too dry. How would "All about Honey" do? I am not sure they have ever sold a pound of honey for me. I have distributed several hundred.

Clinton, Ill. HENRY WILSON.

[Let's hear from others. This makes the second unfavorable report.—ED.]

HONEY SOAKING IN CYPRESS BARRELS NOT SERIOUS.

In regard to cypress barrels, such as I use are of best seasoned cypress. When dry (empty) a barrel will weigh 48 to 51 lbs., and half-barrels 27 to 29 lbs. When filled with honey for several weeks, and then emptied and placed so as to drain thoroughly, a barrel will gain by absorption from 5 to 6 lbs., and half-barrels 3 lbs. I have the best of Fairbanks' scales, and have tested barrels and half-barrels again and again. Half-barrels (cypress) are far preferable to any other packages for shipping honey.

Greenville, Miss. O. W. BLANTON.

THE DANZENBAKER HIVE.

I have used two of the Danz. hives during the past season, and, comparing the results with the Dovetailed hives, the Danz. makes the better showing of results. With my short experience during the season, which has been poor for honey, I am very favorably impressed with this hive, and would inquire if you anticipate making any change in the construction for 1899.

J. K. GOODRICH.

Waterbury, Conn., Oct. 24.

GOOD NEWS FROM CALIFORNIA.

Southern California has at length had a rain. We did not get much here in Los Angeles, but the interior had quite a downpour; and with the rain came the unusual phenomenon of snow. Several inches fell in Riverside and adjacent country. The bee-keepers and ranchers are accordingly much encouraged. We are hoping for a continuation of these favors.

J. H. MARTIN.

Shermanton, Cal., Dec. 10.

A PLEA FOR THE FARMER BEE-KEEPER.

I see quite a good deal in the bee-journals about farmer bee-keepers, and about their selling black and inferior honey at low prices, and spoiling the market for the expert bee-keepers. I see on page 879 Mr. Boardman has something to say about this. Now I want to know why the farmer can get any darker honey than the expert bee-keeper. Do the experts stand at the hive and clean off the bees' feet before they go in? or do they keep a mat at each hive for the bees to clean their own feet on? or do they train them to gather the white honey and leave the dark out?

In regard to farmers selling their honey cheaper, it is not so here, for farmers take their honey to the stores and trade it for other goods, and get the same as they retail it out at, and that is 15 cts. per pound. I am a farmer bee keeper, but I always get the latest style of hive, sections, and fences.

Wakefield, Neb., Dec. 15. R. CHINN.

[You would not be classed as one of the "farmer bee-keepers" complained of. It is those who use old box hives, and sell either chunk honey or honey put up in old dirty last-year sections. In a word, it is the don't-care slovenly fellows, farmers or any one else, that demoralize the markets. Because one is a farmer it does not follow that he can not produce first-class honey. Why, I should say nine-tenths of our best bee-keepers are also farmers.—ED.]

DEAD BROOD OR FOUL BROOD.

I had eight or ten hives containing dead brood the past season. Some of them dwindled to nothing. I united some with other colonies. Some of them had no queen. What you say in GLEANINGS, page 803, will explain that; but some had queens. I took one of the queens and introduced her to another colony that was queenless, and they raised healthy brood. Is there any danger of this disease becoming serious? Is it contagious?

There have been other cases of it in this part of the country. What is the proper thing to do with diseased colonies? I have had fears that it was foul brood; but it does not quite answer the description. The brood dies, turns brown, and dries up before being sealed. Some dies after being sealed.

Ohl, Pa., Nov. 7. M. GUMBERT.

[What you describe I take to be dead brood. This malady is nothing serious. Some seasons it will appear, and then again it will not show itself for several seasons. Comparatively little of the brood dies, and usually the malady will disappear of itself. It greatly resembles foul brood, and the only distinct differences are, first, it is not contagious; and, second, very little of the brood dies—only here and there scattering cells.—ED.]

THE IDEAL SUPER; SQUARE SECTIONS; WIDTH OF CLEATS OF FENCES.

I have been interested in bees for seven years, and have been a reader of GLEANINGS almost as long. I have used tall sections three seasons, and have no use for the square ones any more. I was much interested in

reading Dr. Miller's article in GLEANINGS for May 15, on the Ideal super, and also in Mr. W. C. Gathright's article and Dr. Miller's reply in the Nov. 1st number. I have used a few Ideal supers this past season, and think they are the best and simplest supers in use. I have used section-holders six seasons, and will discard them as soon as possible. A super like the Ideal, with slats, can be filled and emptied much quicker than one with section-holders. The Ideal can be emptied the same as Dr. Miller empties his T supers, illustrated in the A B C of Bee Culture. I think if the editor will try filling a few Ideal supers and a few with section-holders he will be convinced that slats are ahead of section-holders.

There were a few faults in the construction of the Ideal super, fence, and sections. The five sections in a row are about $\frac{1}{8}$ inch shorter than the fence. I think the row of sections should be a trifle longer than the fence so the sections could be tightened endwise with a thin strip between the section ends and the super end. Would it not be better to have the tin strips that the slats rest on made wider, and folded back $\frac{1}{8}$ inch like this? — The way they are now made, they sag between the nails. Don't you think the cleats on the fence are too wide? I filled the sections full of foundation, but the honey was rounded off at the edges opposite the cleats, and the row of cells next the wood left unsealed. I want my honey filled like Mr. Danzenbaker's, and the cleats on his fence are not as wide as the Ideal fence-cleats. Don't you think it would be better to have the cleats long enough only to touch the top and bottom slats about $\frac{1}{8}$ inch? I admire the honey that Mr. Danzenbaker and Mr. Aspinwall produce in plain sections, and hope the Ideal fence will be so made as to give like results.

Lamoni, Iowa.

W. H. DANCER.

[Most of your questions are answered in our Dec. 15th issue, and I would therefore refer you to that number. As to a folded tin for section-holder bottoms, that would be a doubtful improvement, as it would take up too much room. If we did any thing we would make the tin heavier.—ED.]

ABSCONDING SWARMS—WHOSE PROPERTY?

If an apiarist follow an absconding swarm of bees, and they settle on another party's property, can the apiarist claim his bees by law, if he has seen them traveling there?

If a person finds a swarm of bees settled (no one knowing where they came from) on another party's property, whose are they by law, in case both parties claim them?

Red River, O.

J. B. COOR.

[Bees belong to the one who first discovers them, no matter where they came from nor on whose tree or land they may be on; but the finder of the bees can not go and take them against the wish of the owner of the land on which they may be. As to how they would then settle their difficulty, I am not lawyer enough to say; but if I were in that fix I would submit to arbitration rather than have any row.—ED.]



PROSPECTS look a little discouraging after all, in California, in spite of what is said on page 18. A later note from Mr. Martin says there was no rain last year, and but little up to date this year, comparatively. But it is an old adage with the West Coasters that they never have two dry seasons in succession, so there is still hope.

FRIEND Dadant, in his article in this issue, last paragraph, asks some pertinent questions. I do not know that I care to have them answered in GLEANINGS, as we really have not space for social and political discussions; but one can not help smiling when he thinks of the various foibles that cling to the twentieth-century civilization.

IN our last issue, in reference to the fence question I spoke of Mr. Holtermann's having borrowed certain cuts from our catalog and using the same in his journal as a boomerang on the Root Co. After the matter had gone to press, and too late to make the change, I discovered my error. The cuts were bought outright, and I cheerfully make the correction as simple justice to Mr. Holtermann.

THE prospects in the supply line look almost as flattering as last year; indeed, our new engine, that we supposed to be ample for our work, is now pretty well loaded down. We shall have to speed it up and increase the boiler capacity in order to be able to handle our factory. We shall be taking, during the next three months, nearly 300 horse power, and nine-tenths of all our work relates to bee-keeping.

THERE seems to be a demand for a slatted separator—a separator made of slats the same as the fence, but without cross-cleats, so that it can be used with old-style sections. We shall be able to offer these to our customers, as well as the fences. While they will, no doubt, be an improvement over the plain solid separator, they probably will not give the results secured by the fence and plain section in combination.

INVENTING NEW HIVES.

IN the *Revue Internationale* for November, Mr. Ulr. Gubler, a distinguished bee-keeper of Europe, has the following to say in his "Advice to Beginners":

The bee-keeper who knows how to handle tools likes to try to make his own hives, and therein we have only words of encouragement. But let him confine himself to systems approved by the experience of our masters. Refrain from a tendency to make new things, to introduce pretended improvements, before knowing thoroughly the nature of the bee and its needs. The hives that we possess are the result of the studies, the experiments, and the discoveries of a great number of bee-keepers and experts of all lands; and to desire to make new is simply to render oneself liable to pay dearly for the experiments that others have made before us.

JOURNALISTIC COURTESY.

IN the last *Am. Bee Journal* Prof. Cook refers to the time in the early 60's when even the fair name of Langstroth was traduced, and bee-periodicals were casting serious reflections upon each other. He tells how, in these later years, this thing has disappeared; and although he does not refer particularly to the present time, I am rather of the opinion that the article would not have been written except for some things that have appeared in our late current literature.

If the bee-journals of to-day are showing a tendency to degenerate into the ways of old, let them mend their ways at once. I always believe in fair honest criticism, even to the extent of plain talk when the exigencies call for it; but this latter should always be used sparingly.

Mr. York, of the *Am. Bee Journal*, in commenting editorially on Prof. Cook's article, says: "We think all aparian editors, not excepting ourselves, need to devote a little more thought to this matter than, apparently, has been given to it in the past few months." I will subscribe to the statement. I will do all I can, so far as our publication is concerned, in making 1899 a new year. Nay, further: I am not ashamed to make reparation if I have wronged a brother.

THE ASPINWALL MACHINE SECTION-CLEANER.

IN our last issue I spoke of the fact that we were considering the manufacture and sale of a machine section-cleaner. The fact that it was invented by L. A. Aspinwall, that Jackson bee-keeper who produces such fine comb honey—the man who is the inventor of several useful agricultural machines, also inventor of the Aspinwall hive, separator, and super—is evidence sufficient, to my mind at least, that he has a machine that is a success. Here is what Mr. Aspinwall says of it in the *Review*:

Referring to section-cleaners and section-cleaning, the plain sections offer obvious advantages in favor of their adoption. However, the wonderful success of my present machine is certainly greater than I first anticipated, it being adapted not only to plain but to old-style sections. The speed attainable in cleaning plain sections is far greater than I first supposed could possibly be. The highest speed I have thus far attained was at the rate of 192 sections per hour, being upward of 2000 per day. The test of speed, however, was upon a few, and possibly with a larger number I should have failed to maintain that record. Still, I am by no means an expert as yet; but I believe that, in the hands of such, 100 sections could be cleaned per hour.

Mr. Aspinwall, I believe, has it nearly perfected. As soon as it is he is to send us a machine, and then we will see what we can do about putting it on the market, if all goes well.

NUMBER OF COLONIES AT THE HOME OF THE HONEY-BEES; WHY WE WINTER OUT-DOORS.

WE now have in the apiary, safely put away in winter quarters, 252 colonies. A part of this number is made up of colonies from the out-apiary, which this year were brought home to avoid the depredations of thieves.

We winter wholly outdoors in double-walled

chaff-packed hives, and our percentage of loss for the last 15 or 16 years usually runs about three per cent. Not only that, we have strong vigorous colonies in the spring. Our locality is too mild at times to warrant the greatest success, for us at least, with indoor or cellar wintering. After trying the two methods side by side we found the outdoor plan gave us better results.

FIVE - GALLON SQUARE CANS; A GOOD ARGUMENT FOR THEIR USE.

ON page 886 I had something to say about barrels and square cans. Referring to what was said about both in the bee-journals, Mr. Leahy, in the last issue of the *Progressive Bee-keeper*, says :

We used to buy in barrels and kegs, but with us the loss of honey by use of barrels would more than pay for cans; in fact, we were often compelled to empty contents of barrels into cans after we received the shipment. We have no home consumers who will take a barrel of honey, nor yet a half-barrel; but we have many who buy a 5-gallon can from us every year. A can can be set in a warm place, and the honey be kept liquid, while a barrel or a keg can not. Five cents will furnish a nice 2-inch honey-gate, that you can give to a customer to draw the honey from a can with, while it would take 25 or 50c for a faucet with which to draw the honey from a barrel or keg. Our experience has been that panel cans will not crack while being roughly handled; and as they cost no more than cans with straight sides, we advise the use of cans, and panel cans at that. If you have any honey in barrels to sell, please don't let us know any thing about it; but we want some good alfalfa honey in cans.

It is true that a five-gallon can is just right for family size. Whenever we get some extra choice extracted honey, thick in body, fine in flavor, I just take a whole can of it "over home." I always like to treat my bee-keeping visitors to the best honey there is to be had in the United States; and usually (not always) at our house we have something in that line fit to set before a king.

One of these 60-lb. square cans can be set in the house anywhere, next to the stove or down cellar; but it would not do to set a keg of honey in a *hot* place. Say, brethren, would it not be a good idea for us to talk about a family can of honey, just as we talk about a family flour-barrel? There are hundreds, yes, thousands, of families that lay in a stock of eight or ten gallons of maple syrup, and why not honey in equal quantities?

COGGSHALL AND HIS OUT-APIARY HELP; BICYCLES FOR OUT-YARD WORK.

I HAVE already spoken of my visit to Mr. Coggshall about the middle of last October. At that time Mr. C. gave me a photo showing him and his men preparing to go to their out-yard. This I have since had engraved, and show on page 10.

The view was taken just in front of Mr. Coggshall's beautiful residence. Mr. C. and one of his sons are in the wagon. The others stand by their bicycles ready to start. When they go to their out-yards all the helpers go together, some in the wagon carrying empty supers, etc., and the rest going on bicycles. The wheels are used because they enable the men to go in separate groups from one yard to another. They usually go in pairs to each

yard. One pair may precede the rest, get things ready and hives opened up, when they will be joined by one or two more.

You see bicycles enable the men to go and come as they please; and when one or more can't work to advantage at one yard they mount their wheels and go to another.

Wheels are an advantage over horses in another way: bees can't scare or sting them, and at Coggshall's yards this is quite an item.

At each out-yard there are smokers, veils, extractors, kegs, and every thing else necessary to carry on the work of an extracting apiary; so all that is necessary for the boys to do, usually, is to mount their wheels and ride to the several yards.

Niver tells a story about Harry Howe that I can't help repeating here. As nearly as I can remember, the facts are these :

Mr. Niver went over to call on Coggshall, on the first of September. Harry was helping to thrash. Said Mr. Niver to Harry :

"Busy nowadays?"

"No, not very," said Harry.

"What have you been doing?"

"Why," said Harry, "this being the first of September I had to go hunting; walked seven or eight miles; shot several squirrels, and got back in time for dinner. After dinner Lamar wanted me to go to one of the out-yards and take off 200 supers. This I did, and got back about four o'clock, going some fourteen or fifteen miles. As I had a little time left I turned in and helped the thrashers."

"So you haven't been very busy, eh? Let's see: You walked seven or eight miles, and brought home a string of squirrels; wheeled some fifteen miles, took off 200 supers, got back home, and then helped thrash!"

"That's Harry all over," said Niver. "Yes, and for that matter that is about the way Coggshall and all his men work; and then if you ask them if they are busy they simply say, 'Oh! not very.'"

At the time I visited Mr. Coggshall he was husking corn. I asked him what he was doing that for.

"Well," said he, "there was nothing particularly to do, and I thought I might as well husk as do nothing."

"But," said I, "a man who works as hard as you do, at steam-engine pace, ought to have, it seems to me, a little breathing-spell once in a while."

"Breathing-spell! Why, to loaf," said Mr. Coggshall, "would kill me quicker than to work."

SNOW AROUND THE ENTRANCES OF HIVES.

VERY frequently lately the question has been asked whether snow should be swept away from the entrances of hives, especially when it is drifted around about the hives as it has been in most northern localities within the last two or three weeks. I have been in the habit of giving the advice to let the hives alone; that, unless the snow is drifted very badly, there is no danger of smothering the bees, for the snow, if it is light, is full of air; and as to protection, nothing could be better.

Said one of our neighbor bee-keepers, "There is nothing I like to see better than my hives buried up in snow, because then I know they are going to winter well."

But the snow is gone, and has been for a week. We had one of those old-fashioned "January thaws" in December, and since that time no questions have been asked about sweeping away snow.

DOOLITTLE ON ADULTERATION.

BROTHER DOOLITTLE, in the *Progressive Bee-keeper*, thinks there is more noise about adulteration than the facts will warrant; that there is less adulteration now than formerly. If Bro. D. will go over the markets as some of us have done, especially in the large cities, I think he will have reason to change his mind. It is true, honey has come down in price, and so also has glucose, and very nearly in proportion. If friend D. will take the pains to get the price on glucose by the carload he will find that there is a good margin for adulterating yet. If there were not, there would not be so much of it.

I dislike to talk about adulteration as much as any one; but if we bee-keepers try to cover up the fact, or try to convince ourselves that it is not as bad as some folks think, the glucose-mixers will take new courage. All they want is *to be let alone*. In that respect they are like the saloon-keeper, whose business Bro. Doolittle and I mutually despise.

DANZENBAKER HONEY NOT OVERDRAWN.

IN our last issue I spoke of the fact of there having been some criticism to the effect that the illustrations in the *Review* and *GLEANINGS*, showing honey in plain sections, were hardly fair.

I have just received a letter from Mr. J. E. Crane, of Middlebury, Vt., who, after leaving Medina, went to Washington, and there visited Mr. Francis Danzenbaker. After looking over his honey he says: "I do not think that the illustrations of his honey have been overdrawn." I thought so all along myself, but I did not venture the statement, as some, at least, would think I was a prejudiced authority. Mr. W. Z. Hutchinson, a man who has been admired for his fairness, has spoken in the highest terms of Mr. Danzenbaker's honey; and if there is any man in all beedom who knows how to produce a gilt-edged article, it is Mr. Danzenbaker. I have seen but very little of the honey produced by L. A. Aspinwall, of Jackson, Mich.; but from what I have heard of it, I should say it is fully equal to Mr. Danzenbaker's.

It seems to me, friends, we should throw aside prejudice, and learn whether there is

any thing in Danzenbaker's and Aspinwall's systems of honey - production. I am well aware that not *all* fence honey by considerable is equal to the specimens shown in *GLEANINGS*, from Messrs. Danzenbaker and Aspinwall. Yes, some of it is at least no better than honey produced in old style sections; but this difference, I think, is due wholly to the construction of the separator or fence.

QUEEN-CELLS; NATURE AS IT IS.

SOME little time ago Bro. Hutchinson sent me a photo he had taken in miniature, representing some queen-cells. The thought occur-



red to me that this might be enlarged to life size. Accordingly I sent it to our engravers, and asked them to enlarge it to show five cells to the inch. The results were so satisfactory that I immediately sent a proof to Bro. Hutchinson, saying I thought he had a prior right to it—that I would not use it till he had used it in his journal. In due time it found its way into the columns of the *Review*; and now I take pleasure in presenting what I call a work of art in photography and half-tone—a work of art because it is nature itself.

Many times beginners have had a wrong notion as to what constitutes a queen-cell; but here is an illustration that will show exactly what it is like.

Our Roll of Honor.

Symposium of the Veterans, or Those who have Taken Gleanings for 25 Years, More or Less.

In our last issue we promised a little present to the veterans. Well, it hardly seems worth while to draw the line too sharply at just 25 years. Quite a number have taken it for 20 years, some 23, and some 24; and in order to do justice to all, we have decided to send one number of GLEANINGS free of charge to any one for every year he has taken and read it in the past. Thus, you see those who have taken GLEANINGS for 20 years will have 20 issues free, those of 24 years a whole year free, and so on.

Several mention the time when GLEANINGS was printed by windmill power. "Vol. I. No. 1" is dated Jan. 1, 1873; but it was first taken from the press, as I explained in our previous issue, Dec. 6, 1872, and the printing was done at the office of the Medina *Gazette* for the first year. But Jan. 1, 1874, however, we had a press of our own, and the first issue for the year was printed on this press, your humble servant running it by foot power when the wind did not blow; but when the wind did blow I had a mechanical arrangement so that a large windmill (put up for cutting up stuff for hives, etc.) would follow up in the rear, and finally relieve me from working the treadle when there was wind enough. A good deal of the time the printing was done partly by wind power and partly by foot power—that is, the two pulled together. I remember one night when we were late I made preparation to run the press all night. As there was not a breath of wind there was no way but to tread it out. About ten o'clock, however, a breeze sprang up, the press kept going faster and faster; but as the wind came up gradually I learned to feed as the speed increased; and under the inspiration of seeing my two hobbies at the time work together (the printing-press and the windmill), I put in the sheets so rapidly that I was through and at home not much after midnight. Of course, there was some grumbling among the subscribers because some of the sheets were printed crooked; but when I explained the matter they were very kind and forbearing, and let me down easy. After that it began to be a kind of standing joke that any crookedness (either in the journal or bee-hives) was to be attributed to the irregularity of the windmill. Before Vol. III. was out, however, the wind proved to be too uncertain for the hive trade as well as for our enlarged circulation, and a 4½-horse-power Bookwalter engine was put in to supplement our power when the wind did not blow; and for a while both the windmill and the engine pulled together quite amicably. Now, then, let us hear from the veterans:

GLEANINGS has come to my home continuously since the first number. I have kept the numbers. Honey-producing has been my principal pursuit all these years. As might be expected, the enthusiasm of the earlier years has materially abated. An interest in intensive farming, fostered by GLEANINGS, is my present hobby.

Farina, Ill., Dec. 21.

T. P. ANDREWS.

I have taken GLEANINGS for over 25 years. I wish you a merry Christmas.

D. H. TWEEDY.

Dillonvale, Ohio, Dec. 23.

I am unable to fix the exact date of my first subscription to GLEANINGS, but I know that I have the 26 volumes complete, *not one number missing*.

E. Springfield, O., Dec. 23.

R. M. REYNOLDS.

I commenced bee-keeping 21 years ago last fall, and have been a constant reader of GLEANINGS during that time, and am pleased to say that I am a paid-up subscriber. I can say that, for these 21 years, I have read GLEANINGS with much pleasure and profit. Wishing it a long life and a wide circulation I am

Yours respectfully,
Battle Creek, Mich., Dec. 21.

W. S. WRIGHT.

As you request in last GLEANINGS, I will say I commenced to keep bees Jan. 5, 1872. I think about two years after that I heard of GLEANINGS, and have been a subscriber ever since, and have all the numbers ever printed, having sent for all back numbers. I have every one preserved up to present time without a missing number; also the *American Bee Journal* for the same time. I shall be 71 years old next June.

Newburgh, N. Y., Dec. 22.

MARCUS D. DU BOIS.

I remember very well when, 26 years ago, I received No. 1 of GLEANINGS. I have every number of the paper from that day to this, and, still better, my subscription for 1899 is paid. Age tells, so I can not get around among the bees now as I did 25 years ago; but my two little boys are a very great help to me in the management of my 65 colonies.

W. M. WILSON.

Bardstown, Ky., Dec. 23.

I have taken GLEANINGS from the time you printed it by wind power. I got interested in aparian pursuits over forty years ago by reading Langstroth's book. I have had as many as 225 colonies. In the summer of 1883 I harvested 12,000 lbs. of honey. I am still in the business. I could not do without GLEANINGS. Long may it live, and eternity only will tell its influence for good.

GEORGE BRIGGS.

New Sharon, Ia., Dec. 22.

You may remember "Novice" and the *A. B. J.* of Washington, D. C., and the cistern that came so near being filled with honey, and the large queen ("Giantess") that was followed to the woods, and a certain jeweler who fell in love with bees. Well, I am one who has read after him more than 25 years, and am yet reading GLEANINGS. I hope you may be more and more useful to the end, and receive a crown of life.

J. B. DINES.

Libertyville, Mo., Dec. 22.

I am one of the number that have taken GLEANINGS for 25 years or more. I received the first number that you printed, and have received a copy of every number that has been printed since. I have never missed a number in the 26 years. I have a likeness of you with Blue Eyes on your lap. I have been at your place, and seen you and Blue Eyes; also your wife and your brick house, and hope to see you again—if not in this world, in the world to come.

A. J. HOOVER.

Dorranceton, Pa., Dec. 22.

I am an "old timer." I used to read Novice's writing in *American Bee Journal* when published by Samuel Wagner, in Washington, D. C., and have never missed an issue since GLEANINGS was first published. I have had considerable dealings with the publisher, and have no fault to find. I am a native of Ohio—was born in Brownhelm, Lorain Co.; moved from near Oberlin to this county in 1852, and settled on the farm that I now own and occupy. I have made a success of bee-keeping, take it all together.

Farley, Iowa, Dec. 23.

JAMES SCOTT.

I have watched your progress ever since you commenced writing for the *American Bee Journal*, for I have taken that journal from No. 1 until the present, and I have also taken GLEANINGS from its beginning until now. In fact, we feel pretty well acquainted with you in many respects. Most of this time I have been in New Hampshire, but for four years past have been sojourning in this mountainous region of Western North Carolina.

I first became a bee-keeper the day I was 18 years old. I came here to escape the rigors of our New England winters, and find I can be much more comfortable. I have had something to do with bees here, but am not largely interested in them.

If in your travels you can find time to call here you will be warmly welcomed by several of your custom-

ers, including the subscriber. I often think of the pleasant time I spent at your place a few years ago.

Hendersonville, N. C., Dec. 21. J. L. HUBBARD.

In last GLEANINGS you invite the oldest subscribers to stand up and be counted. Well, I have had a copy of every page of GLEANINGS that was ever issued; and, if memory serves me well, I was a deeply interested reader of "Novice" in good old Uncle Samuel Wagner's *American Bee Journal* for some time before GLEANINGS was born. I have followed you with the deepest interest through all your bee career, and, in a small way, have been a patron and correspondent. Prosperity always excepted, very many of my experiences have been notably like your own, even to my "Giantess," the largest and most beautiful queen I ever saw. Do you remember yours? I have also been for forty years a Congregationalist, and many years deacon and Sunday-school superintendent, and have always read *Our Homes* with much interest.

Excelsior, Minn., Dec. 23. J. W. MURRAY.

I have the first year's vol' me now as you sent it, bound with metal clasps. I have piles of the back volumes and some "Juvenile" GLEANINGS. I have many things about my premises that remind me of Medina and the Root family—among them a large extractor, the insides and gearing from you; also a saw-table and appurtenances, and many other minor conveniences. Bee-keeping has always been a subordinate branch of my industries, but GLEANINGS has always had its interest and charm for me, and none of its departments have been skipped. I have that friendly feeling and love for the whole Root family that any one who has read GLEANINGS so long must have. The Home Papers and the gardening notes have all reached me. I heartily congratulate you on the full-grown, healthy, and clean GLEANINGS which is now before me, and I trust it may continue to come as regularly into my home in the future as in the past.

Burlington, Vt., Dec. 22. A. A. LEWIS.

My time dates even back of 25 years to the little leaflet printed quarterly by the windmill—yes, and back into the old *American Bee Journal*, 1869 to '73, have I read with so much pleasure and interest from the pen of our old and worthy friend Novice. Now that you ask for responses from your earliest and continued subscribers, it gives me great pleasure to be enrolled as one of them. Well do I remember the changes in appliances and improvements wrought out in those 25 years. I will also mention my appreciation of the Home Papers, tending to elevate and bring us to a higher plain: High-pressure Gardening, Notes of Travel, the Rambler, and poor old Father Merrybanks, all of which must be appreciated by your many subscribers.

What a reunion these 25 year subscribers would make! and what a bee convention! How I should like to attend, and hear the very friendly and interesting discussion of changes during the past quarter century! And now, friend Root, may you be spared for many more years: and may GLEANINGS continue to be our half-monthly visitor in the future as in the past.

F. H. CYRENUS.

Oswego, N. Y., Dec. 20.

In 1871 or '2 I had a very severe attack of bee fever, and gathered and read and studied all in the line of apiculture that I could get, and spent many sleepless "though pleasant" hours after I retired at night, thinking and studying of the bee and its nature. Through the kindness of some one the first issue of GLEANINGS was placed in my hands. I was so pleased with it that I became a subscriber, and have been a constant reader of its pages ever since, and have the entire volume of GLEANINGS on file except a few numbers and one volume that I loaned to some of my friends that were interested in bee culture, and did not return it. GLEANINGS has been a pleasant and instructive visitor all the years at our home. "Our Homes" has caused many bright and happy hours during these years, and I trust it may cause many more in the eternal home beyond.

High-pressure Gardening and Notes of Travel have also been a source of great pleasure.

I wish GLEANINGS continued success, and expect to have it visit my home many years yet, and can join heartily in your wish that we could get together and tell stories about old times; but though we may not meet here I trust and pray that we may meet beyond the river of time, where we have the promise, if we are faithful, that we may enjoy far greater blessings with Him who has gone before to prepare a home for those who will be his followers.

Arendtsville, Pa., Dec. 21. AARON I. WEIDNER.

We notice your call for the names of those who have taken GLEANINGS for 25 years or more. We claim a front seat in the list. We have taken GLEANINGS since its first number, though we have had to pay for but a few subscriptions, owing to our becoming advertisers before the end of the second year, and therefore had the paper kindly sent to us free ever since. We have been contributors to and advertisers in GLEANINGS ever since 1874, our first advertisement appearing in the September number, and our senior's first contribution some time during the previous spring. We have sold to you and bought from you thousands of dollars' worth of bee-goods, and have looked in vain for another firm which has been as closely connected with yours in a friendly or in a business way as we have been. We have preserved every number of GLEANINGS, and also a full file of the *American Bee Journal* since its first number in 1863. We have also almost all the copies of Moon's *Bee World*, *The National Bee Journal*, *The Illustrated Bee Journal*, *The Bee-keepers' Guide*, *The Bee-keepers' Magazine*, *The American Apiculturist*, and also of all the bee-journals that are still published in America. In addition we have preserved sample copies of many ephemeral sheets, the perusal of which ought to discourage any beginner from attempting additional publications in a field that is so well covered. I will name a few: *The Indiana Bee-keeper*, *The Bee-keepers' Exchange*, *The Kansas Bee-keeper*, *The Bee-keepers' Instructor*, *The New England Aparian*, *The National Bee Gazette*, *The Texas Bee Journal*, *Our Apiary*, *The Bee-keepers' Advance*, *The Western Honey Bee*, *The White Mountain Apiarist*, *The Practical Bee-keeper*, *The Bee-keepers' Enterprise*, *Success in Bee Culture*, *The California Bee-keeper*.

Among the foreign bee-journals we have full files of the *Revue Internationale*, of Switzerland, *L'Apiculture*, of Milan, and *L'Apiculteur*, of Paris, and two dozen other periodicals of less value. For some reason we have somewhat neglected our English friends, and have only a few years of the *British Bee Journal*, with stray copies of several other publications; and we still neglect to mention all the Canadian bee-publications, and the Spanish and Chilean "Apicultores."

Yours in the hope of being with you as a firm, if not in person, in another 25 years.

Hamilton, Ill., Dec. 21. CHAS. DADANT & SON.

In one sense of the word I have not been a subscriber for 25 years or more. In the winter of 1880 or '81 I was working for a bee-keeper. There is where I first saw GLEANINGS. Now, how could I have been a subscriber for 25 years or more, when I never saw it till it was seven or eight years old? At that time I knew nothing of bees, nor did I expect to ever work with them, yet I loved to read *Our Homes*, and about Merrybanks and his Neighbor, etc. In 1882 I sent my name to Medina, and is there yet (and I expect it to stay as long as I and the Home Papers last). Don't throw this away yet, brother, but read on and hear of my claim as a member of that roll. Not being satisfied with what I had of GLEANINGS after reading it for a year or two I commenced hunting for back numbers, and with the help of GLEANINGS I got them all, commencing with a book of eight pages, or 100 pages the first year, 1873, and closing this year with 950, giving me 26 volumes of nearly 20,000 pages of reading-matter. Now, what I want to know is, after reading them all, paying for them all, must I stand back, or am I a member of that Roll of Honor?

Orion, Wis., Dec. 22.

F. L. SNYDER.

To be sure, you are a member of the Roll of Honor, friend Snyder. It makes very little difference whether you subscribed in the outset or thought enough of our journal to send for the back numbers. In fact, it shows more regard for a journal to go away back and hunt up every number that was ever printed, as you did, than to take it right along from the beginning. And there is one thing, friend S., that you did not mention in the above. Through these same Home Papers you were led to Christ Jesus, and have probably, since that time, carried the gospel of glad tidings to many another hungry soul. Well do I remember that pleasant visit at your home on the banks of the beautiful Wisconsin River.

Continued in our next.



Thou hast loved righteousness, and hated iniquity.
—HEB. 1:9.

THE NATIONAL ANTI-SALOON LEAGUE CONVENTION HELD IN CLEVELAND, DECEMBER 6, 7, 8.

This meeting had delegates and representatives from every State in the Union, on the very first day. At the head of the program I see a motto that sums up briefly the sentiment of this organization :

Let us emphasize points on which we agree, and avoid subjects as to which we differ.

I was on hand some time before the meeting opened, and was captivated at the outset by the song service conducted by L. L. Pickett, of Wilmore, Ky. Friend Pickett is one of the geniuses of the age. Before he had opened his mouth I felt sure, from looking at his face, that the man had " vim " of some sort. He commenced by asking some of the singers in the audience to come up and stand beside him and help. I said to myself, " Old chap, you have put your foot in it this time. You will not get a single person to proclaim himself a singer by coming up there in front." But friend Pickett was sharper (?) than I was. He evidently did not expect the singers to come up and help on the first invitation ; but he repeated his invitation in different ways, and, in fact, made an exhortation, and they did come up and sing, and he made the audience sing too. He seemed to take it for granted that they would not send away down to Kentucky for a man to conduct the singing unless he *could* conduct it. And he *did* conduct it too. He said he wanted everybody to sing, whether he could sing or not ; and if all could not sing, he asked them to read the words over and think what they meant. I began to sing, and sang myself happy long before the meeting adjourned. Mr. Pickett is not only a singer, but he is a *genius*. Somebody at my elbow suggested that his zeal sometimes led him to overstep the established rules of harmony ; but, dear me ! who cares for " rules of harmony " when souls are dying from the lack of the gospel of Jesus Christ ? Friend Pickett is not only an exhorter on temperance, but he is a natural born evangelist and Christian worker. As soon as we had a recess I stepped up and told him I wanted to congratulate him on the rare and precious gift God had given him. And then I met one of my " happy surprises." He said something like this : " Why, bless your heart, friend Root, I used to be a bee-keeper, and I took GLEANINGS. My boys take care of the bees now, but I read your Home Papers just as regularly as the journals come." When GLEANINGS first started, or for several years after it started, I used to set the names in type, and stamp the wrappers, and I learned to know every name, address and all ; and that word " Pickett " used to strike me every time I went over the list.

Now, I can not tell you *all* about the grand talks we had on temperance. Rev. Louis A. Banks, of Cleveland, made the opening address ; and when he told us that our temperance work was not confined to Ohio, nor even to the United States, but that it was to be carried on into Cuba, Porto Rico, the Philippines, Alaska, and finally over the whole wide earth, then we began to be impressed with the importance of this *national* organization. Gen. Shafter has already declared that no American saloon shall be opened in Santiago ; and one cargo of beer has been sent away because he would not permit it to be landed on the coast. Now, then, if the United States of America and the rest of the world can not stand back of Shafter, and help him to carry it through, we ought to be ashamed of ourselves. It would seem from Dr. Banks' talk that the army officers, and, in fact, almost everybody else except the *beer-brewers*, are loud in demanding that the canteen system in the army should be abolished, and that at once. What is the reason, do you suppose, it still hangs on when every good man and woman is opposed to it ? Just because the rum power has got us *all* by the *throat*. Dr. Banks did not say that in just so many words, but *I* say it. It was either the doctor or the speaker who followed that gave us a little history of New England. He said that, in former times, the great merchants of the city of Boston used to look after the enforcement of law, and see that the police, mayor, and other officers did their duty. Later on, the *manufacturers* of the great cities in the East took a hand with the merchants, and kept down gamblers, burglars, and highwaymen, and held up law. Said the speaker in substance : " Good friends, who is it *now* that looks after the enforcement of law in that good old city of Boston, the hub of the universe, as its friends are wont to call it ? Why, it is the *beer-brewers* and *whisky-men* who have their clutches so firmly riveted to every department of law and order that they pretty much run the whole thing. Now, do not think that I am making a tirade against *Boston*, and singling it out as the worst city of the United States. What is true of *Boston* is pretty nearly true of every other large city in our country. And it is not the large *cities* alone that are suffering from this blighting curse in municipal management. And finally, dear brothers and sisters, is it not true that your own little town or village is fast being managed in such a way that no law can be enforced where it strikes the pockets of *brewers* and *liquor dealers* ? "

As this last shot went home to my heart it almost sent a chill through my veins to be obliged to confess that here in our little village of Medina, a place of only about 2500 inhabitants, the thing he pictures is getting to be veritably true. We have been making a raid on the blind saloons here in our town, as I have told you ; but just at present it looks to me as if a strange kind of blight had struck not only the witnesses called up, but every officer of our town, and almost every other town, when a case comes up involving the liquor-traffic. The witness who is bright and clear

until he gets on the stand suddenly becomes stupid and dumb. He does not *know* any thing, and does not *remember* any thing. The officers of the law, in some strange and inexplicable way, declare the evidence is not sufficient, or that there was a flaw in the law or town ordinance. If it is before a jury, the jurymen, who are bright and clear, honest and straight, in handling every crime *except* the illegal sales of liquors, suddenly become half-hearted or out of sympathy with the temperance folks and temperance works. Now, may God forbid that this should be the case in *your* town, my good friend. I know we have men who stand up unwaveringly for the enforcement of temperance laws. We have them at our Anti saloon League meetings; but a great part of them are ministers of the gospel—men who have not any property to be destroyed; but these faithful servants of a righteous God have several times lost their *lives* because they waged an uncompromising war against this evil. At the Stillman Hotel, where we stopped, we were offered a reduction providing two of us would occupy the same room. My room-mate was from Vermont. Before we retired I found that his dwelling, barns, and stables had all been burned because he pushed ahead in prosecuting the saloon-keepers. His friends told him his property *would* be destroyed, but he said it would have to go—that is, if the conditions under which he kept it were that he should stop meddling with the whisky-dealers. A good many persons had suffered in a like manner; but, may God be praised, within the last few months, in a good many towns in Ohio at least, it is getting to be the *fad* to fine and imprison saloon-keepers who violate law.

The response to Dr. Banks' address of welcome was made by Rev. E. S. Chapman, of the Northern California Anti-saloon League, Oakland, Cal. When Dr. Banks spoke it seemed to me as if there could not be another address equal to it during the whole session; but Dr. Chapman was not a whit behind; and I had another of my "happy surprises" when Rev. W. F. Crafts, Ph. D., gave us his address entitled, "The Saloon in the New Century." No wonder we had a startling array of talent, energy, and enthusiasm for righteousness, for we had about the best men that could be picked from each State of the Union. The social interchange of thought during recess, at mealtime, at the tables of the Stillman House, and other places, was a very valuable and important feature of the whole gathering. If any one of you, dear friends, have lost heart and courage in this terrible combat, let me advise you to attend the meetings of the Anti-saloon League. Almost every town now, little and big, is having a law-and-order-enforcement branch of the League. In this way a single person is not called upon to stand before the enemy alone as a target for their spite. It is an organization of good citizens who are in favor of law enforcement. Let me give you a few illustrations of what is being done. Of course, we have to depend a good deal upon detectives; but the brewers too get hold of the detectives. In one little town in Ohio

a Cleveland detective was employed to get evidence. He got it very easily. One of the saloon-keepers found out what was in the wind, approached the detective, and offered to pay him *more* money than the Anti-saloon League could pay. But our League was too sharp for even this game. They shadowed the detective with a good man, and arrested him in the act of receiving \$250. He was to receive this money for being off where he could not be found when he was wanted as a witness. That detective is now in the Ohio Penitentiary, where he can be found every time he is wanted, until he pays the penalty of his crime. I did not learn what they are doing with the saloon-keeper.

Here is another point: In many of the little towns the brewers own the saloon, and they protect the saloon-keeper as a matter of course. But in one place we worried them so badly that they told the saloon-keepers of that town to pack up their furniture and liquors, and ship them back to the Cleveland house. Said house declared they could not stand the "racket." They said they would have to find another town, where the people were not so strongly in favor of temperance, or wait till the thing had blown over a little and the temperance craze had quieted down.

Now, then, ye people of this land of liberty, as we are wont to call it, what shall the future be? Is the rum power to run things according to its ideas of law and order, or is it to be in the hands of the good people—those who love righteousness and hate iniquity?



A WHEELRIDE THROUGH SOUTH DAKOTA.

After the bee-keepers' convention at Omaha had adjourned I made a trip to South Dakota to look after half a square mile of land located within about a mile of the town of Mitchell, Davidson Co. Besides looking after the land I wanted to look after a very good friend of mine, Mr. C. M. Peck, in the employ of the American Sunday-school Union. Friend Peck has been for a good many years locating Sunday-schools, and exhorting and reviving schools already started through that portion of the State. Let me go back a little.

Three or four years ago Bro. Peck had a project for holding meetings in a tent as an auxiliary to his Sunday-school work throughout that locality. He thought that, after he had the tent, he could raise, by way of collections and subscriptions, sufficient to pay for it. But somebody would have to advance the purchase money. Now, do not think I wish to boast when I tell you it was my *privilege* to furnish the funds. From time to time I had heard good reports of the tent work, and these reports have been accompanied by remittances so that the money I advanced had been all paid back some little time before my

visit. Friend Peck met me at the train, and announced that there was to be a meeting out on the great prairies, a little over thirty miles away. Now, friend Peck is a wheel-rider, and I had my chainless Columbia with me, and so I proposed that we should by all means go on our wheels. But he thought we had better take the train. He feared that thirty miles would be too much for me in one afternoon, especially if we wanted to be in good trim for the meeting in the tent that Saturday evening.

"Why, look here, Bro. Peck. I never ride on a train under any circumstances when there is a possibility of making the same trip by wheel. In fact, I have often ridden the wheel when I had a ticket in my pocket to go on the train."

So, off we started. Now, I have a good many times, as you may remember, told you about the "finest roads for wheeling in the world;" but the black prairie soil, when it is tramped down hard by travel, and swept cleaner than any housewife could sweep a floor, by the tremendous Dakota winds, is certainly equal to any thing on the face of the earth. In many places it is scarcely a bit behind an asphalt pavement. Providentially the wind favored us; and it blew as only Dakota winds *can* blow. Oh what fun we had that afternoon! The thirty miles of road was almost a level stretch, or at most only slightly undulating; and all the way was through large farms, some of them a mile square, sometimes a square mile of wheatfields interspersed with grass and pasture. Before sundown we could see the tent, a little white speck away off in the distance.

The Rev. R. N. Kratz was to assist in the services that evening, and we caught sight of him sitting in a camp-chair at the door of the tent, reading. My two friends feared the cold lunch they oftentimes put up with in their tent work would not be just the thing for me. But I assured them, first by words and afterward by practical demonstration after riding thirty miles in one afternoon, that almost any kind of wholesome food, providing there was plenty of it, would answer tiptop. I remember vividly that we had a cold chicken. And then there were some loaves of brown bread made of Dakota flour. Now, I am very partial to bread that is well baked, and old enough to be tolerably dry, and this filled the bill to a dot. I am very fond of the right kind of bread and butter; in fact it is, a good deal of the time, almost the only thing I eat with my beefsteak. But this bread was certainly the most palatable and satisfying of any I had ever before found, east, west, south, or north; and, to tell the truth, every bit of bread I saw while in Dakota seemed to be quite a little superior to any thing in that line I ever got hold of before. First I give the credit to the wheat grown on those dry prairies, and then to the good housewives who know how to make bread, and, in fact, to do almost any thing else in the way of getting up an appetizing meal. I was somewhat acquainted with Bro. Kratz already. I first met him and learned to love him in our Medina County jail. One Sunday when I was pleading with

a pretty good-sized class of prisoners (that was years ago, before the saloons of Medina were banished) Bro. Kratz was brought in and introduced to me. We were both at that time engaged a good deal in prison work, and therefore when he reached Medina, and somebody told him I had a class in the jail, he obtained permission to come in. I do not know how much good his exhortations did the prisoners that day. It seems to me his kind and earnest words ought to have saved at least one soul if not more. But they warmed my heart toward him in a way I shall never forget. I do not know but he will scold me for what I am going to tell you. As I got it from other parties I may not have gotten it straight; but I took pains to find out, and I know I am pretty nearly right when I tell you that he dropped a government position, relinquishing quite a good sized salary, in order that he might take up with this evangelistic work over the Dakota prairies, even though the latter did not afford him more than a half — perhaps not even a *third* — as much as his former office. He did it because God's voice *called* him to the work. Now, Bro. Kratz is a Methodist while Bro. Peck is a Congregationalist; and yet these two friends labored together in a way that brought to my mind again and again the story of David and Jonathan in holy writ.

Toward dusk loads of people began to come in from away out across the prairies; and, oh what a nice meeting we had!

The next morning I wanted to see the sun rise out on the great prairie. In fact, my two friends told me that sometimes there were beautiful mirages to be seen. But the mirages did not get along that morning, but something *else* came along. Bro. Kratz put his head out of the sleeping-tent and happened to get a glimpse of my chainless wheel, and asked me some questions about it. Now, we were all away out in the country. The houses were nearly a mile apart, and there was not anybody up, anyway. I suggested to Bro. Kratz that he should get out on the smooth road and just run it a few rods to see how it would go. Well, he started off; and as it seemed easier to go ahead than to stop, he kept on; and the next thing I knew the minister in his shirt-sleeves and slippers, and his white hair flying, was getting out of sight in the distance, on the beautiful Dakota roads, on that beautiful Sunday morning. By this time Bro. Peck looked out, and we had a big laugh to think of the devoted pastor riding a wheel just for sport on Sunday morning. Bro. Peck suggested that Bro. K. was going around the square so as to come in from the other direction. I wonder if some of my good friends will not think I am a little loose in my ideas in regard to keeping the Sabbath. Permit me to say, briefly, that, were it not for the precedent it might be setting, I would do a great many things that I now refrain from doing. I once asked a noted divine a question something like this: "Bro. Ryder, if you were on an island, as was Robinson Crusoe, and you and your wife and children were the only inhabitants, if I understand you correctly

you would not hesitate to take your horse and buggy and ride around the island Sunday evening."

"You are right, Mr. Root. The greatest reason, if not the only one, why I do not go out riding Sunday evening is because of the example it would set to those who, when they once get started in Sunday riding, would have no conscience or scruple to control their actions."

About nine o'clock loads of people might be seen coming from every point of the compass. All came—old and young. I do not know that I ever attended a Sunday-school or meeting where there was so much diversion in the way of childish prattle from those who were not old enough to know any better; but the childish prattle just made me feel happy, and I am sure my two friends felt as I did about it. The meeting kept increasing in size all day long, and we had four different services; and after the evening meeting had got started the people came crowding in to such an extent that we tied up the side curtains of the tent, and there was a great circle spread out on the grass all around in every direction from the speaker. The services were all short, sometimes all three of us taking part in one meeting. Some arose for prayers at the close of the meeting; but aside from this I know that good was done to many more, by the animated faces and close attention given to every word that was uttered.

In the afternoon we were invited a couple of miles away to take dinner at a farmhouse. Let me say, by the way, that I made a similar visit in the same place seven years ago last November, and I felt greatly pleased to see so many prosperous farms and new comfortable houses that have been built in the interval since I was there. They do not get large crops of wheat on those great Dakota farms—that is, not great crops per acre; but when the people become acquainted with the climate, and make due calculation for the possible dry summers, they manage to get a'ong very well.

The next morning we were up bright and early, and I was greatly interested in seeing Bro. Peck pack his tent, and load it all on to a one-horse wagon—not only the tent alone, but a sile tent for sleeping and cooking, and seats enough to accommodate about a hundred people. The whole outfit, wagon included, under Bro. Peck's careful planning, cost only about \$150. Such a tent answers every purpose for outdoor meetings much better out on these dry prairies than it would in ordinary localities. In fact, one can sit or sleep on the ground out here, without any trouble.

After we were all loaded up two of us were to ride wheels, and the third was to drive the horse. In order to enjoy the trip we changed about. First one would drive, and then another. And, by the way, very providentially, the wind changed during the night, and blew just the other way. In one of the finest stretches of road on our way home, Bro. Peck and I timed ourselves for speed. If I remember correctly I rode a mile in a fraction less than four minutes. Bro. Peck got it down to three

minutes and a half, and said he thought he could make it three. But neither of us felt like exerting ourselves unduly just to tell how fast we could ride.

The artesian wells of South Dakota that I had so much to say about in November and December, 1891, are still pouring forth their liquid treasures. But I was greatly disappointed to find that, at least in the vicinity of Mitchell, but little use is made of the water for irrigation. Several had an idea that the minerals that this artesian water contains are rather detrimental to at least many crops. There were, however, different opinions in regard to the matter. We passed many artesian wells, some of them throwing large streams of water; but it seemed to be used mainly for watering stock. In many places it just runs off into a quagmire instead of being a benefit to any one.

The next day we made a trip off about twenty miles to the north. We had the usual powerful wind that blows almost every day in those regions. If it is behind you, all right; but if it is coming in your face, travel on a wheel—that is, with most wheels—would be practically out of the question. There were three of us with two wheels and the horse and buggy. We decided we could get home that afternoon by changing about; and with my chainless Columbia I found I could make some headway, even when the wind blew a regular gale; and then when it slacked up I could shoot ahead at a pretty fair speed. In this way I made ten miles in one afternoon without becoming very much fatigued. On the way I caught up with a wheelman whom I afterward found to be the mayor of the city of Huron. Just for fun I told him to try my wheel and I would try his. He had one of the best up-to-date chain wheels. I could not work his against the wind at all, and had to give it up; but he got along very nicely on mine.

THE WEATHER ALMANACS, LONG-WEATHER PREDICTIONS, ETC.

My attention has just been called to an article published last January in the *Monthly Weather Review*, by the U. S. Weather Bureau, Washington, D. C. From this article I make the following extract:

The least rational almanacs are those that pretend that the weather is controlled by planetary combinations and stellar influences, therefore such predictions are properly said to be based upon astrology.

Let me copy still further from the same article:

The least scientific system of preparing the almanac predictions was explained to the editor many years ago by a gentleman whose almanac made the greatest pretensions to high scientific accuracy. This gentleman stated that on certain days he felt endowed with a certain ability or inspiration. These were his weather-making days, on which he sat down, and, with the most absolute confidence in the accuracy of his work, wrote up the weather for the coming year, continuing at the work for a considerable time until the inspiration seemed to leave him, whereupon he necessarily stopped, and delayed resuming the work until again filled with the spirit of divination.

Undoubtedly some almanac-makers adopt a combination of the preceding methods; but, in general, these seem to be the principles most widely recognized in

the long-range predictions of the almanacs, except on'y that in all cases the authors make free use of a system of general and rather indefinite terms that will apply just as well to a thunderstorm, a hurricane, or an earthquake. The warning, "Look out for something very unusual about this time," is, of course, not a meteorological prediction, and not nearly as definite as the railroad signboard, "Look out for the engine when the bell rings."

Our readers may remember that I declared with some vehemence that a knowledge of astronomy does not warrant scientific men or any other class in declaring that they can predict a whole year ahead what the weather is going to be. Now, the above, from the Weather Bureau, throws a little light on the matter. Even though I can not understand how maps showing how the motions of the planets should help one in making long range weather predictions, I can see some sense and consistency in claiming that God gives "inspiration" to certain persons; but establishing the *claim* of this inspiration would be quite another matter. "By their fruits ye shall know them." If a man who claims to be inspired keeps using the stereotyped phrase, "Look out for something very unusual," etc., I should demand that he tell beforehand what the "unusual" thing is to be. If his followers declared, after it was past, that it meant dry weather at one time, floods at another, a blizzard, or unusual heat for the season of the year, etc., I should reject the "inspiration" theory. Wouldn't you? In regard to the question as to whether the combined science of the present age gives any encouragement to these long-range predictions, permit me to quote just two sentences from an article by Prof. Willis L. Moore, chief of the U. S. Weather Bureau, in the *Forum* for May:

At the present time I know of no scientific man who essays to make long range weather predictions; and I would especially caution the public against the imposture of charlatans and astrologists, who simply prey upon the credulity of the people.

I believe it to be impossible for any one to-day to make a forecast, based fairly upon any principles of physics or upon any empirical rule in meteorology, for a greater period than one or two days in winter, or for more than two or three days in summer.

While we are on this subject, permit me to say that I have been reading the questions and answers in the Cleveland *Daily News* and *Herald* for more than a year back, and I have been both pleased and surprised to note the soundness and correctness of answers covering almost every realm of science, geography, and history. If the *Herald* has one man who can answer so well every thing that a world of people propound, he is certainly a scholar. Well, in a recent issue somebody who was curious in regard to this weather matter pounds the following questions:

1. On what are the predictions of certain almanacs based which tell what the weather is to be through the year in advance?

2. Why does not the United States Weather Bureau employ the prophets who do this work, and so get predictions a long way ahead?

3. What connection is there between the weather and the changes of the moon?

Below are the three very sensible answers:

1. Various systems, all no better than guesswork, except as they take account of the known probable duration of "dry spells," "cold waves," "heated terms," and the like, are used. The predictions rest on nothing more substantial than a sort of loose prob-

ability that the weather will change at about the stated intervals.

2. Governments aim to get as far as possible away from guessing in their scientific departments.

3. None, so far as known.

SOMETHING FURTHER IN REGARD TO THE LOSS OF MR. COWAN'S CHILDREN.

THE following is copied from a leaflet just received from Mr. Cowan.

"Death is swallowed up in Victory."

"Underneath are the Everlasting Arms."

"This is the Victory that overcometh the World, even our Faith."

IN LOVING REMEMBRANCE OF

HELENA MARY

AND

HERBERT FRANCIS COWAN,

who were taken home in the

Wreck of the "MOHEGAN" on October 14th, 1898,
on the "Manacles," near the Lizard, on the
Coast of Cornwall.

Their bodies were recovered the next day, absolutely uninjured; and the beautiful, calm, holy expression on each of their faces proved that death for them was an entrance into life eternal, and the Everlasting Arms were indeed beneath and around them as they were carried and tossed by the relentless waves amongst those terrible rocks, and laid perfectly unharmed upon the shore. Their bodies were laid to rest at Budock, near Falmouth, almost in sight of the scene of the disaster, to await a joyful resurrection.

In addition to the above I take the liberty of making a brief extract from a very kind letter from friend Cowan himself in regard to this sad event:

Indeed we have much to be thankful for, as both our dear ones had devoted their lives to their Master's service; and after they had been called home the beautiful expression on their faces testified to their entrance into glory. They died as they lived; and we heard from a survivor that they had refused to go into the life-boats, as they were good swimmers, and the life-boats should take those who could not swim, and they were seen apart on the deck of the vessel, quite calm and collected, and went down with the vessel. Death must have been instantaneous.

GLEANINGS is always clear and up to date, and I can say for one that I can get all the information that is necessary out of it. Your Christmas number is something of a "hummer," and plenty of good reading for bee-men; also useful for reference to the whole year's journal, which is worth considerable to all subscribers.

W. M. DICKINSON.

ONE DOLLAR WELL INVESTED.

About a year ago last September I sent you \$1.00 for GLEANINGS, with a promise of a queen as a premium; and now at this late day I am going to give you the results of my venture. GLEANINGS came all right, and so did the queen. At that time I had no good place to put her majesty excepting a rather small queenless colony of very doubtful ability to winter. But I put her in, and kind o' hoped she would go through, because she came from the same State so many of our good presidents did. In fact, I named her Mrs. McKinley. Last spring when warm weather came on, she began to preal out and fill the hive up with brood; and out of 15 colonies she outdid them all. I took over \$10.00 worth of honey from her hive, and they are packed away now with a far better prospect for another year than they had last. That was the most profitable dollar I ever squandered in my life.

GLEANINGS is cheap enough without any premium; but you know we bee men always take any thing we can get.

SANFORD HARTMAN.

North Platte, Neb., Nov. 6.